Scandinavian Arts

BY

HANS HILDEBRAND

SOUTH KENSINGTON MUSEUM

ART HANDBOOK.

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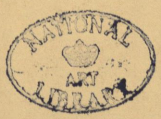

SOUTH KENSINGTON MUSEUM ART HANDBOOKS.

THE INDUSTRIAL ARTS OF SCANDINAVIA.

This Handbook, treating of the Industrial Arts of Norway and Sweden before the conversion of those countries to Christianity, has been prepared, at the request of the Lords of the Committee of Council on Education, by DR. HANS HILDEBRAND *as a companion volume to that on the Industrial Arts of Denmark during the same period by Chamberlain Worsaae.*

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THE INDUSTRIAL ARTS OF SCANDINAVIA

In the Pagan Time.

BY

HANS HILDEBRAND,

Royal Antiquary of Sweden.

New Edition.

WITH NUMEROUS WOODCUTS.

Published for the Committee of Council on Education

BY

CHAPMAN AND HALL, LD.

1892.

Richard Clay & Sons, Limited,
London & Bungay.

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SCANDINAVIAN INDUSTRIAL ART.

INTRODUCTION.

THE STONE AND BRONZE AGES.

THE word *Scandinavian* needs explanation. Some years ago a history of Scandinavia, written by an Englishman, was published in England. It gave the history of Denmark, and some occasional notices of historical facts relating to Sweden and Norway. When I speak of Scandinavian art in this book, I use the word Scandinavia in quite the opposite sense—I mean the art practised in Sweden and Norway.

The history of the north of Europe dates from a comparatively recent period. It begins at the time when the Vikings came to the western countries—towards the close of the eighth century—filling those parts of the civilised world with an intense terror. These heathen warriors, hardy, accustomed to toils of every kind and all the perils of an adventurous career, without any just estimation of the worth of human life—either their own or that of their victims—plundered churches and monasteries, killing without the least commiseration numbers of men; those whose lives were spared found themselves checked in their peaceful pursuits, and saw, with horror, their sacred ideas and holy things outraged in the most atrocious manner. It would have been impossible for them to think that the industrial art of their barbarous enemies

could be to their descendants the subject of any consideration; they had only tasted the superiority of the physical strength and barbarous impetuosity of the Northmen; at the utmost they could only have a certain degree of respect for a courage which feared nothing, and which triumphed over the ordinary securities of a regulated life. A later period, it is true, forgetting all the miseries of the epoch, has discovered that "it was the settlement of the northern pirates, which finally made Gaul French, in the modern sense;" and that their influences have been of very great importance, even to England. The archæologists of the north have been able to show that these men, who seemed to their victims to have only one interest—war, murder, and rapine—really possessed also industrial arts of a kind so characteristically developed that even we, men of the era of engines and steam, have a great deal to learn from them.

Roman authors of the early imperial time had some notions of Northern Europe—few and slight, it is true, but giving some tangible facts in a darkness not illumined by the light of history. Pliny had heard of a country in the extreme north called Scandinavia. The name, although Romanised, is correct; it exists even to-day, but changed of course, as, in the lapse of time, language is inevitably changed. The southernmost province of Sweden is called in the present day Skåne. The old northern literature shows that the final *e* is an abbreviation of an older *ey*, in Gothic *avi*, which signifies island, and also, a projection from a mainland. Skåne is, therefore, Scandinavia, and hence the name borrowed from Roman literature ought strictly to be applied to the southern part of Sweden, or, in a wider sense, to the whole land of which the province of Skåne is that part which lies nearest to those who were able to give the Romans an account of *ultima Thule*. For a time it was the custom to comprehend, under the name of Scandinavia, the three countries of Denmark, Sweden, and Norway, all nearly connected in consequence of the close affinity of their inhabitants. But in recent

times a distinction has been made, and with reason, between Denmark and Scandinavia; the latter comprising Sweden and Norway.

Scandinavia cannot boast of as high an antiquity as some other countries of Europe, for instance Britain. In the quaternary period Scandinavia was a glacial stronghold, a centre of glacial movement, which exercised its destroying sway over a great part of Europe—Western Russia, the north of Germany and Holland. Boulders derived from Swedish rocks have been found as far away as Silesia and the Low Countries. At that time vegetable and animal life were out of the question in Scandinavia, and there could be no place for the existence of man.

We have certainly a Scandinavian STONE AGE, and Scandinavia's earliest inhabitants were in such a rude state of civilisation that they did not as yet know the art of polishing their flint implements. This circumstance has naturally tempted some archæologists to fix the earliest appearance of a Stone Age in Scandinavia as contemporaneous with the Palæolithic civilisation of Western Europe, which is characterised by a total absence of the art of polishing flint. In a science so new as prehistoric archæology errors will unfortunately occur very often, and unquestionably it is one of the very gravest to attach undue importance to a comparatively insignificant circumstance, while more important facts are overlooked. It is quite true that the first inhabitants of Denmark and Scandinavia did not polish their celts; but, on the other hand, it is an indisputable, and a really more important fact, that the aborigines of the northern countries were not surrounded by a quaternary fauna. Their animal contemporaries belong entirely to the present era. The reindeer, characteristic of the quaternary period of Western Europe, and still living in the north of Scandinavia, has been said to have been found in Scandinavian turf-moors, in which antiquities of the Stone Age abound; but closer investigations, evoked by the critical tendencies of modern times,

show that the remains of the reindeer have been found in layers *underlying* the turf-moors. The reindeer did not therefore exist in Southern Scandinavia when the first inhabitants, coming from southern, or rather south-eastern regions, arrived to commence the long series of northern civilisation.

It is necessary to give some explanation of the word south-eastern. When the relation between the earliest appearance of the Stone Age in Denmark and Scandinavia and the Palæolithic civilisation has been referred to, attention has usually been directed to the south-western countries, of which the Palæolithic civilisation is well known, not only to every archæologist, but also to the general public. I cannot accept this conclusion, athough proposed by scholars of high scientific eminence. When twenty years ago I visited the British Museum for the first time, I was astonished to find, in the department of British antiquities, types which I did not know from my experience of stone implements preserved in the museums of Sweden and Denmark. I noted a single hatchet only as belonging to a type common in Sweden, and this I afterwards heard from Mr. A. W. Franks had been bought from a Swedish sailor. My first impression has been confirmed by later studies. There is a considerable difference between the Neolithic Stone Age of Britain, as it is described by Mr. Evans in his excellent work on this subject, and the Stone Age of Denmark and Scandinavia, and, if we extend our observations to a wider territory, the Neolithic Stone Age of Belgium and Northern France has the same characteristics as that of Britain, while types corresponding to the Scandinavian are found not only on the southern coasts of the Northern and the Baltic seas, but also in Poland and Russia, in countries where the existence of Palæolithic man has been proved. If it be absolutely necessary to establish for the Neolithic age provinces, each possessing distinct types, independently of the distribution of the geological strata and their contents, it is not the less necessary to seek for such an explanation of those provincial differences as

chronological and topographical considerations will admit. If English archæologists were to trace the origin of their Neolithic types to the quaternary period of Western Europe, I should find it quite natural. But on the same principle, I hold it most probable that the origin of the Scandinavian types is to be sought for in the Palæolithic period of Eastern Europe—where such a period really has existed.

There is another circumstance which ought to be kept in mind in discussing the relation between the earliest appearance of the Scandinavian Stone Age and its later development. The oldest types are found in the greatest number, and under the most interesting circumstances, in the refuse-heaps bordering some of the Danish coasts. These characteristic refuse-heaps, consisting of stone implements, shells, bones, &c., are wanting in Sweden; but I believe their absence in the southern part of Scandinavia, in the province of Skåne, to be quite accidental. In Denmark they are found on the coasts sheltered against the strong influences of wind and waves. But the coast of Skåne is open everywhere, and the present non-existence of refuse-heaps corresponding to the Danish ones is no proof of their not having once been there. The implements characteristic of these refuse-heaps are found scattered over at least some part of the soil of Skåne, although they are not very common there; moreover, it can hardly be supposed that a people living on the isle of Seland, where the Danish refuse-heaps do occur, would have been deterred from crossing the very narrow Strait of Öresund, which separates Skåne from Seland. But the most developed of the ancient types found in Denmark and in Skåne, in the refuse-heaps and out of them, are such that their close connection with those of a later age is manifest. The shape is exactly the same, the only difference lies in the absence of polishing. The art of polishing is a most important phase of progress, but the invention, in itself so simple, must be regarded as depending on purely accidental circumstances. Every man

fabricating or using a rough stone implement might in an idle moment and without any distinct purpose grind the flint against a soft stone, and observing the smoothing effect of such an action his intelligence would have been uncommonly dull, had he not found out that a smooth and sharp edge was in many instances preferable to a rough one. In establishing therefore the difference between Palæolithic and Neolithic ages, it is not well to attach too great importance to the circumstance of the flint being polished or not. We must in this case, especially as a transition can easily be conceived, depend for a decision exclusively on the difference between the faunas, and whether the implements are contemporaneous with extinct animals characteristic of the quaternary period, or with those actually living. In the Danish refuse-heaps the fauna is modern. It is true that there have been found bones of the Great Auk, a bird now extinct in Denmark and Scandinavia; but the slight importance of this fact is made apparent by the circumstance, that bones of this bird are found in Sweden, together with antiquities belonging to the Iron Age.

The Stone Age of Scandinavia was very important, and is richly represented in our museums. The types of it are numerous and highly developed. Its superiority, in variety of form and in technical skill, to the Neolithic culture of Western Europe cannot be questioned. But in a work on Scandinavian art a dissertation on this age would be out of place; it has no relation to the truly Scandinavian art of the epoch approaching to the historical period; neither does the Scandinavian Stone Age belong exclusively to Scandinavia—the same characteristic types are found not only in the provinces of Denmark, but also, as already stated, in a wider district: in the province of Drenthe, in Northern Germany, in Poland, and in the interior of Russia. Stone, however skilfully worked, gives but a slender opportunity for ornamental designs, which best reveal the propensities of a people, while objects in wood have perished; urns of clay indeed remain,

although, in most cases, in a broken state. For my purpose it is sufficient to call the attention of my readers to Fig. 1, representing an urn found in the province of Skåne in 1819, in the first scientific examination of a Swedish dolmen. It exhibits very simple linear patterns, the only kind of ornamentation habitual to the Scandinavian Stone Age. In Norway, where the first inhabitants naturally were later, a tomb of the Stone Age is hardly known.

As the northern vikings of a much later age have been regarded as pure barbarians, it may be of interest to state that the contents

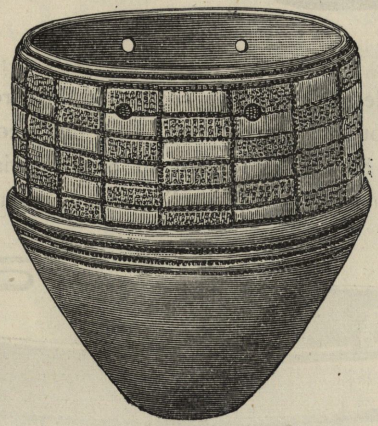


FIG. 1.—Urn found in a Swedish dolmen.

of the Scandinavian dolmens prove that the people of our Stone Age had several domesticated animals: the dog, horse, ox, swine and sheep, perhaps even the goat. Hence they did not live exclusively by hunting and fishing, and were certainly a pastoral people, but whether they practised agriculture cannot be decided in the present state of our knowledge. Probably we may attach some importance to the fact that the greatest number of tombs and the oldest ones occur in the most fertile districts of Southern Sweden.

In Scandinavia, as in Britain, the Stone Age was followed by the BRONZE AGE. Flint exists in Scandinavia as well as in Denmark and Northern Germany, and was easily found. In Sweden and Norway there exist copper mines, but their working is of com-

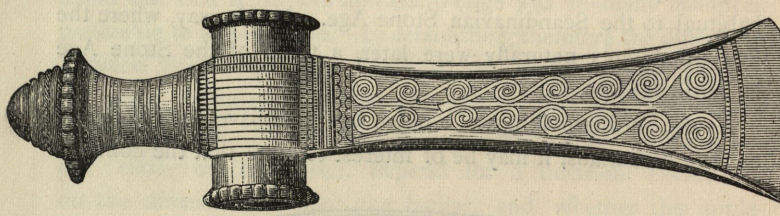


FIG. 2.—Bronze hatchet found in Sweden.

paratively modern date. The copper of the Bronze Age must have been brought from abroad, and tin, necessary for the production of bronze, is foreign to Scandinavia. The knowledge of working any metal implies an enormous progress.

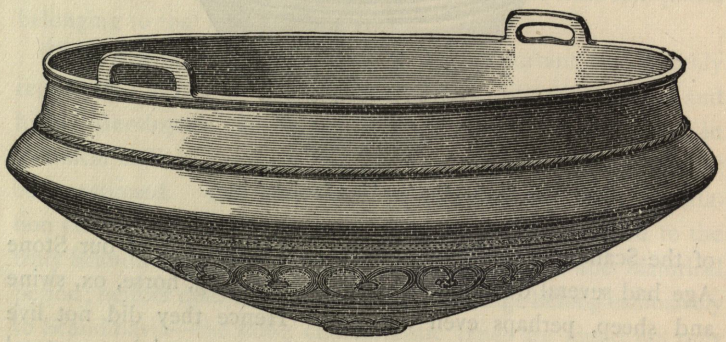


FIG. 3.—Bronze vessel found in Sweden.

The types and the ornamentation of the Scandinavian Bronze Age are of the highest interest to the archæologist, but I will not here dwell on them, as there is no connection between the patterns of that period and those of later Scandinavian art. Still some

specimens must be given, especially as the Scandinavian Bronze Age in its development, through a period of which the length cannot as yet be determined, shows two different kinds of ornamentation. One, a severe and pure style, is here represented by the hatchet, Fig. 2. The other, more free and preferring large surfaces, is characteristically represented by Figs. 3—6: a vessel and the

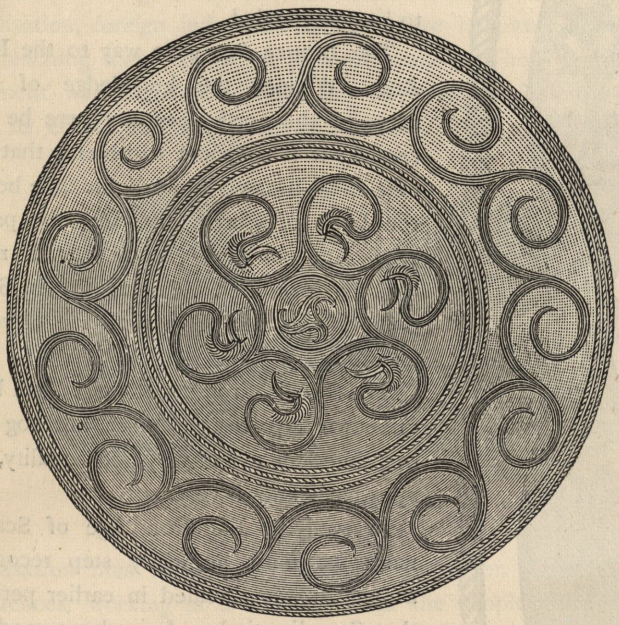


FIG. 4.—Bottom of another vessel. Sweden.

bottom of another vessel, both found in Sweden; a collar found in Sweden, and a fibula from Norway. Fibulæ of the same pattern are very often found in Sweden.

The Scandinavians of the Bronze Age possessed much technical skill. The art of forging the heated metal was unknown to them; but they were masters in the art of casting. When the implement was taken out of the mould it was, by means of dipping

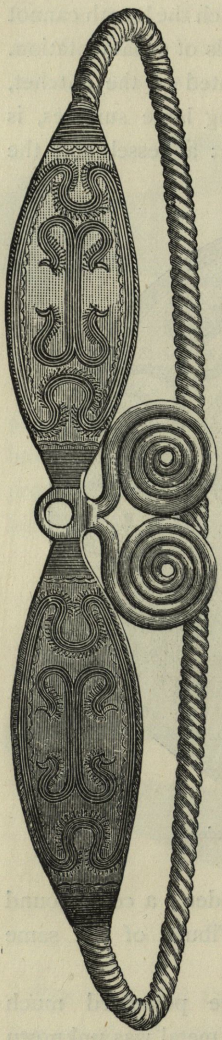


FIG. 5.—Collar of bronze, found in Sweden.

in cold water, made elastic,—a method supposed of late to have been invented towards the end of the past century—and very often the surface was ornamented by means of punches made of bronze as modern experience has shown. The skill as well as the good taste displayed is much to be commended.

The Bronze Age gave way to the IRON AGE. Whence the knowledge of iron came to the north need not here be discussed; it is sufficient to observe that the new metal became known some time before the birth of Christ, and that the pagan Iron Age of Scandinavia lasted more than ten centuries. Christianity in Scandinavia does not begin until the eleventh century.

The Swedish iron mines must have been unknown in prehistoric times, but bog iron ore, abundant and of very good quality, was apparently known very early.

In studying the Iron Age of Scandinavia we must at every step recognise a fact already revealed in earlier periods, that Scandinavia has derived many advantages from its situation at the end of the world. The great revolutions in the centre of Europe, the mixture of people, the considerable throng of influences coming from almost every corner of the world, naturally left the extreme parts comparatively untroubled.

On the European continent changes

were constantly occurring. At a time when the peoples were in a state of migration, one tribe was scarcely settled in a certain district, when either its position became unsafe or a more favoured country allured it, and it moved on. The new state of civilisation thus created had therefore only a temporary character. In the North the circumstances were completely different. Owing to its distance from the centres of European civilisation, foreign influences arrived there late, and the tribes on reaching there could not pass on further. The whole development was therefore slower, but its workings lasted longer, and its effects had abundance of leisure to ripen. The northern

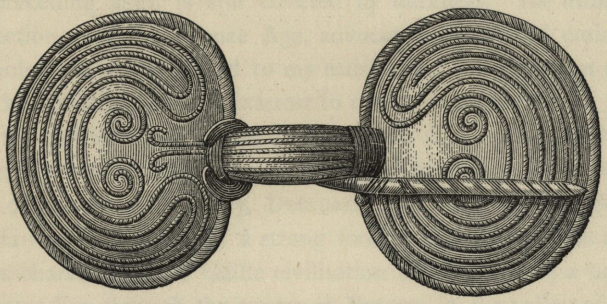


FIG. 6.—Bronze fibula, found in Norway.

civilisation thus attained a consistent character. The foreign influences, working at a distance from the people from which they issued, and thus avoiding the crushing results of close contact, were gradually assimilated to the old and native cultivation to which they gave a new colour, instilling a fresher life.

Such a state of things has its disadvantages as well as its happy results. The hastier evolution effected in countries where the acting forces were more numerous and various, and more energetic, brought early blossoms of high and noble arts, which we miss in the extreme North. The old Scandinavians were restricted

to a narrower compass, but within that they were able to gain a fuller ripeness and to give even in the smallest details a clear expression of their national individuality. They furnish us with an excellent opportunity to study the secret laws which govern the development of industrial art.

In this way the English of our own time have something to learn from the ancient civilisation of their enemies of old.

THE IRON AGE OF SCANDINAVIA.

ORIGIN AND FIRST DEVELOPMENT.

THE origin of the Iron Age, although much nearer to us than the two preceding ages, is still covered by darkness. Its intimate connection with the Bronze Age, advocated by several eminent archæologists, is not proved to my satisfaction. But we can pass over this question as of no interest to our present purpose.

In the earliest epoch of the northern Iron Age—I use this term because even now there is no very great difference between some parts of Northern Germany, Denmark, and the south of Scandinavia—we find traces of a strong foreign influence. The antiquities characteristic of Gallic civilisation are found over a broad belt extending through the centre of Europe, in the valley of the Rhine, in the hilly districts of Thuringia, in Bohemia and Moravia as well as in the west of Hungary. Especially in Bohemia, coins, regarded by numismatists as Celtic, have been found in great numbers. The only conclusion to be drawn from this archæological fact is that Gallic tribes have lived in this extensive region, and this conclusion is in the most decisive manner supported by the evidence given by the Roman authors. This Gallic civilisation of Central Europe is closely related to those relics of British antiquity which Mr. A. W. Franks calls late-Celtic.

The tombs of the earliest Iron Age of Northern Germany, Denmark, and Scandinavia are not very rich, but they give us the interesting information that the people buried in them had been

subjected to a very strong influence emanating from the Gallic tribes living close upon the southern limits of the Teutonic area.

Then came a new period characterised by a strong Roman influence. The empire had extended widely towards the north. Roman civilisation flourished in the valley of the Danube as well as in that of the Rhine. Relations were speedily established with the barbarous neighbours who came to the Roman markets, and who were, no doubt, visited in return by Roman merchants much to their profit. But after a time the relations with the barbarians became too close to be agreeable to the Romans. The Teutonic tribes living on the outside of the frontier had gained a strong idea of the advantages of Roman civilisation, and had become very anxious to obtain possession of its fruits. As to the means, they were not very strict; they were conscious of possessing great physical strength and indomitable courage, qualities which were not in the same degree shared by the degenerate Romans. Strife, warfare, and hostile inroads upon Roman territory alternated with periods of a more peaceable character, when commercial habits were re established.

In these fluctuations between hostile and friendly relations the Scandinavians were not involved. Roman coins and works of Roman industrial art, in whatever way they had come into the possession of the neighbours of the empire, went towards the north by means of friendly intercourse. These products of a superior civilisation came as far as the southern coast of the Baltic, but that was not the end of their wanderings. The Teutonic tribes surrounding the sea or living on its islands were undaunted sailors.

In the centre of the southern half of the Baltic lies the island of Gotland, in our time often visited by those who are enticed by the picturesque ruins of the city of Wisby, or who desire to study the architecture of the twelfth and thirteenth centuries. The soil of this remarkable island has shown itself fertile in ancient treasures of the most important nature. In the year 1872 about 3,000 Roman

silver coins were known to have been found there, and since that time their number has increased. If we direct our attention to the larger hoards of coins, as from single specimens we are not able to gather any valuable conclusions, we find that there existed a regular traffic over the Baltic, through Germany, between Gotland and the Roman provinces, from the epoch of the Marcomannic war down to the time when Septimius Severus found it consistent with sound economical principles to make the Roman silver coins so bad, that even the barbarians refused to take them. But this fastidiousness of the Teutonic tribes did not put an end to the relations. They lasted, as Scandinavian finds show, till an epoch subsequent to the Hunnic invasion and the revolution that it provoked.

Not only were coins brought to Gotland and other parts of Scandinavia, but works of art, utensils, and personal ornaments of Roman workmanship were cherished by the Scandinavians. Moreover, Roman patterns exercised a decided influence on indigenous industrial art. Partly because of the enlivening influences of this period, the Scandinavians made an important progress, and one of its most marked results is, that from this time we are able to show that the Scandinavians commenced to develop artistic characteristics different from those of their kinsmen living to the south of the Baltic.

During this period the first traces of Runic letters appear in the North, of which the origin, at least according to the opinion of the eminent professor Sophus Bugge, of Christiania, is to be sought in a Roman alphabet, transformed by the Celtic tribes of central Europe.

However, for our purpose the remains of this period are of no direct importance. Scandinavian art was still in its first beginning. We must give it time to develop itself, to acquire a surer footing and more decided tendencies.

We need not wait a long time. The Slavonic tribes extended themselves along the southern coast of the Baltic, in a territory

previously occupied by Teutonic nations. It is not possible to fix the exact date of this movement, which afterwards gave to the early German middle age one of its most interesting features. But one thing is perfectly evident, that the relations of the Scandinavians with Southern Europe did not definitely end at the epoch of the Hunnic horrors.

On the death of Attila, his sons were not able to establish themselves as heirs of his aspirations. Their tottering power restored to the subjugated Germans their national intrepidity. They liberated themselves, and the intercourse, friendly in the North, often unfriendly in the South, became re-established. Of the altered circumstances we have a positive proof in the Roman and Byzantine gold coins found in Sweden; at this moment no less than two hundred and fifty are known, and every year brings to light new ones. Many of these coins must have been perfectly unknown to the imperial mintmasters; their more or less barbarous aspect makes it probable that they are the work of some Teutonic tribe, which kept up a frequent intercourse with the empire, and had accustomed itself to its gold. Nor need we entertain any uncertainty as to the Teutonic tribe, to which we are to trace back the origin of these coins. We can find only one answering to the circumstances, the Ostrogoths living in Pannonia.

The latest coins of this kind brought by a regular traffic to Scandinavia, bear the portrait of the emperor Zeno. In Gotland several coins of Anastasius have been found, but it is possible that their existence there depends on peculiar circumstances. After the time of Anastasius only isolated stragglers found their way over the Baltic.

The Roman gold coins found in Scandinavia, not those which arrived after the dissolution of the Hunnic power, but the earlier, of the time of the Constantines, give us a valuable indication of the commencing independence of Scandinavian art. The Constantinian medallions, highly valued by the collectors of our day,

were rare already in their own epoch, at least outside of the Roman provinces, too rare by far for the demand. The Teutonic tribes, not being able to get as many as they wished, commenced to copy them. We can easily imagine what the character of such copies would be : a distorted representation of the imperial head and of the figures of the reverse, a poor attempt to reproduce the Roman letters, that conveyed no meaning to the copying Teutons.

Whether these copies were executed in Germany or in Scandinavia, is as yet not perfectly clear. This we know, that original medallions as well as imitations have been found in Scandinavia.

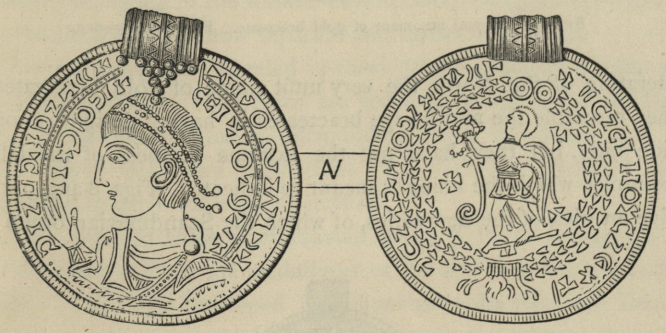


FIG. 7.—Barbarian copy of a Roman medallion. Found in Sweden.

One of the latter is here figured (Fig. 7) : on the obverse is the bust of the emperor with one hand raised before his breast; as is seen in the medals of Constantius II., and a meaningless transcript of the original legend; on the reverse is a Victory surrounded by a laurel crown and a barbaric legend.

To imitate badly is natural to all lower civilisations, when they take patterns from higher ones. Of greater interest it is to observe how a vigorous national art seizes degraded copies and makes them the starting-point for a quite new evolution. The bad imitations of the Roman medallions called into existence in

Denmark and Scandinavia, under the skilled hands of the indigenous goldsmiths, a new group of one-sided medals meant to be used exclusively as personal ornaments, as is shown by the never-failing loop. These have received in the archæological

FIG. 8.—Personal ornament of gold bracteate. Found in Sweden.

literature of the North the very unfit name of gold bracteates: they resemble the middle-age bracteates in having designs on one side only, but they have not the extreme thinness of the later examples which the name is meant to indicate. Figs. 8 and 9 will give an idea of the new series, of which the Scandinavian origin is

FIG. 9.—Personal ornament of gold bracteate. Found in Sweden.

proved by the great number of specimens found in Scandinavia and Denmark contrasted with their scarcity everywhere else. Here we find the work of dissolution arrested, and the elements remaining at the time of this change used as suggestions for

further creations. The head of the emperor remains, but the hair-band with its hanging ends has coalesced with the hair, and beneath the head has been added a quadruped, of which it is somewhat difficult to give the precise zoological name. Besides these principal figures, which are very common and appear in an endless number of varieties, smaller objects occur, for instance, birds and symbolical figures, as the *svastika*, the *triskele*, &c. In most cases the figured field is surrounded by a narrower or broader rim, ornamented in different ways. Sometimes for the perverted Roman legend has been substituted an inscription in Runic letters. As Fig. 9 shows, the figures were not always the same, the imperial head has developed into a complete body, and the quadruped, which in the former case seemed designed to support the bodiless head, is now separate and turned towards it.

The technical skill revealed in these golden bracteates is not at all contemptible. The figures are certainly quaint and ungainly, but in the ornamentation surrounding them we often find a harmonious taste and indications of a skill that enabled the workman to carry out what he desired.

The origin of these Scandinavian works is to be sought, as I have already said, in the medallions of the epoch of the Constantines. The fully-developed Scandinavian imitations are found under circumstances which make it necessary to attribute them to the epoch when the later Roman and Byzantine gold coins were imported into Scandinavia. Between the two epochs occurs the interruption of the intercourse between the northern countries and the south, caused by the invasion of the Huns. The golden bracteates indicate how the Scandinavians, severed from the continued Roman influence, were occupied with the creation of a new national type.

At a later time Byzantine silver coins were brought to Scandinavia. We know from history that at that time Scandinavian warriors entered the body-guard of the Byzantine emperors and made themselves known and respected through feats of wonderful

prowess. The presence of the Scandinavian warriors in the Mediterranean Sea is proved by the Runic inscriptions chiselled on the noble marble lion of the Piræus, now placed outside the entrance to the Arsenal of Venice. Professor Bugge of Christiania has shown it to be probable that the man who far from his home carved these inscriptions, had come from central Sweden. The frequency of the relations between Scandinavia and Miklagard (the great city), as the Northmen called Constantinople, would lead us to expect that the later times of the pagan civilisation of Scandinavia would show some traces of a Byzantine influence. But in this respect we are deceived. Such traces are, to say the least, exceedingly rare and insignificant. Even the number of later Byzantine coins in the Scandinavian finds is much less than we might reasonably expect.

After the sixth century the Roman civilisation is of no importance to Scandinavian art until it reappears at a later epoch in the form of Christian art.

THE LAST PERIOD OF THE EARLIER IRON AGE.

Modern researches have made it probable that the Northern Iron Age commenced some time before the birth of Christ; and if we take the word in its usual sense as denoting the *pagan* iron-age, it lasted on into the eleventh century, a long period, only in its later years, and then occasionally, illumined by the light of history.

As I have indicated, northern archæologists have been able to distinguish in the first part of this Age two periods, one without any trace, the other with numerous traces, of Roman influence. To establish the sequence of races in a period for which we have no data expressed in years, we have no other guides than the antiquities which have come to light out of the Scandinavian soil, where they have been intentionally concealed as offerings to the dead, or as treasures for which a safe hiding-place could not

be found above ground ; or where they have been accidentally lost. Most important are of course the sepulchral deposits and the treasure hoards, because they show what was in use at the same time. Sometimes, also, it is possible from the position of the objects found in a tumulus to draw conclusions as to the chronology we desire to establish.

But to solve the chronological question we have no better or more trustworthy way than to study the evidence afforded by the antiquities themselves. Every work of human art, higher as well as lower, has its shape determined by two agents : the end which it is to serve, and the taste of the people and the time of which it is a fruit. The practical side of an object gives only insufficient information, as in most cases what is called for by a purely practical want is too simple in itself to give the knowledge we desire. A knife will be a knife : it may belong to an Englishman or a Hottentot, it may be dug up out of the ruin-heaps of Babylonia, or be quite fresh from the factories of Sheffield. A pin will always and everywhere be a pin ; a pointed slender thing, possessing a head to prevent it from slipping out of its place. But in the artistic design which a certain object reveals we can study the people who produced it, and when a people in the course of time advances in taste, as well as in other respects, we can follow it in the changes that appear in different objects serving the same purpose, in the main character identical, but in details offering the most curious variations.

We can see how the art of a people, whose taste has for some time been developed in the same direction, steadily advances from the most insignificant beginning to higher degrees of perfection, and then when the taste gradually becomes directed into another channel, the old impulse loses its freshness, and is deprived of its early power to create clearly defined shapes and details.

I will not here enter into a long discussion on the importance of such typological studies. It will be more agreeable to my readers to have an opportunity of judging for themselves by observing

some links of a chain of evolution which I have selected from the finds brought from the isle of Gotland and now preserved in the Royal Historical Museum of Stockholm.

Fig. 10 presents to us a bronze fibula which must belong, for reasons too detailed to enter on here, to the end of that period in which the influence of Roman arts was felt in Scandinavia. The general form is a cross, of which the stem is curved upwards. The pin itself is very simple, only the end of a bronze wire that has been attached to the transverse arms by being wound

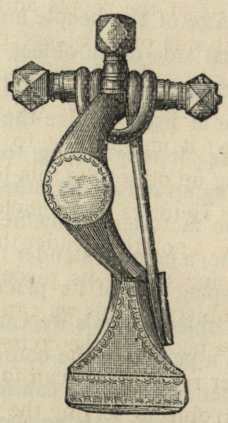


FIG. 10.—Fibula. Gotlandic type.

in a spiral round one of them, then bent backwards to be brought over to the opposite arm and to be twisted round it in another spiral. This method of fastening the pin is very good and gives it the needful elasticity. That the specimen here figured is somewhat late we can see partly from the circular enlargement of the stem, partly from the widening of its end. Quite naturally we draw from this type a conclusion, which infers an earlier type without these enlargements. As to the construction of the fibula, it must be observed, that what is here, in the figure, turned

upwards, was when the fibula was in use placed in the opposite direction.

The circumstance that influences of Roman art appear in this fibula, gives some indication of the epoch to which it is to be attributed. I do not fix the date lest I should be forced to give my reasons, but as a proof that we have before us the work of an epoch of widely spread commercial relations, I may state that in a Gotlandic tomb containing specimens of this fibula, were found some cowrie shells from the Indian Sea.

I am convinced that nobody will overlook the near relations between this fibula, or rather its predecessor, to which I have alluded, and another given in Fig. 11. The constituent parts are the same, but at the same time changed, partly owing to its larger size. The lower end has acquired the shape of an animal's head. In this specimen we see a continued development of the elements possessed by the fibula which I said was the precursor of the one given in Fig. 10. As I have called it an ideal type, I must add that it really exists in the Scandinavian finds although it is not figured here; and it occasionally occurs in Roman finds in England.

The fibula of the type represented by Fig. 11 is exceedingly rare in Gotland, whereas it is very common all over continental Sweden and Norway, and appears in this wide district in a number of varieties, from which we learn, that the Scandinavians had a predilection for this pattern for a period so long, that they found time to change and rechange its less important parts. In Denmark it is very rare; a curious fact, which forms an exception to the general rule, that Danish and Scandinavian antiquities of this period are closely related. The importance of this type is heightened by the fact that the same fibula reappears in England. In his interesting work on *Saxon obsequies* in the neighbourhood of Wilbraham in Cambridgeshire, Mr. Neville has given illustrations of many specimens belonging to several varieties, ranging from the original pattern given in Fig. 11 down to its most degenerate successors. I leave to further researches to decide whether the

distribution of this type, especially its early disappearance in Denmark, stands in any relation to the historical indications concerning the original home of the Angles.

If we now direct our attention to the fibula Fig. 12, we shall at first find the difference very great; but, on a closer examination, we shall be struck by an identity in the fundamental parts,

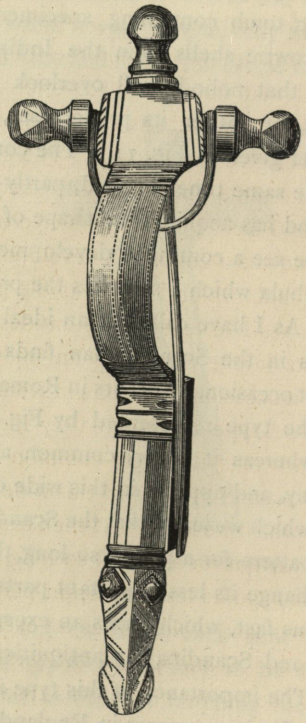


FIG. 11.—Fibula, of a type common in Sweden and Norway.

especially if we put it side by side with Fig. 10, or rather with its somewhat earlier predecessor, which must be the direct ancestor of Fig. 12. The terminating knobs of the cross arms are not defined so clearly as they were at first. The pin has been pierced in its upper

end and attached to the upper rim, thus causing the disappearance of the third knob. The spiral laid around the arm and the part of the wire bent back were now completely superfluous, but the conservative mind of the workman did not let them entirely disappear. They remain, but they have sunk down to mere useless ornaments. The reminiscence of the spirals is preserved in the transverse incisions of the arms, and the back bent wire has been converted into two curved bands connecting the arms with the principal arc of the fibula. The working out of this change is clearly seen in the two fibulæ Figs. 13 and 14, belonging to the same type. In the first the

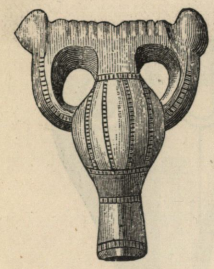


FIG. 12.—Fibula. Gotlandic type.

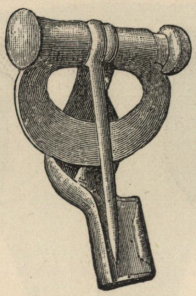


FIG. 13.—Fibula. Gotlandic type.

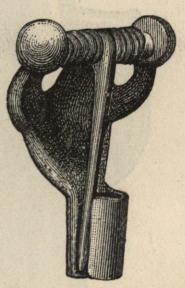


FIG. 14.—Fibula. Gotlandic type.

earlier wire, now a band, is still separated from the arc, in the second it has entirely coalesced with it.

This development is not restricted to Gotland only. We find it in several parts of Scandinavia, but with some difference in the general aspect, as shown by Fig. 15.

The transverse lines representing the original spirals soon disappeared. The bandlike successor of the back bent wire was too wide to be lost in the same way. But its superfluity was quickly perceived and the workman was anxious to find some remedy; then the two holes between the bands and the arc were filled up, but, reverencing the past, even in small things,

he preserved the contours of the earlier holes, exchanging in this way one meaningless feature for another not at all better in this respect (Fig. 16).

In a sound state of art-development it was not possible to stop here. What in the course of time had lost its meaning and its life, and what remained only as a reminiscence of something that had passed away, must, if it was still possible to tolerate it, acquire a new life, and, when the old spark had been long extinguished, a new meaning must be infused into the dead remains of the older state.

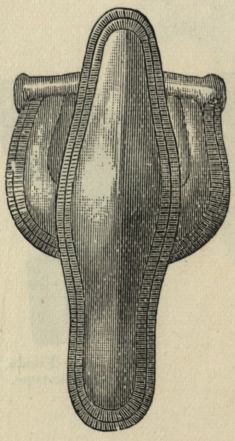


FIG. 15.—Fibula. Scandinavian type.

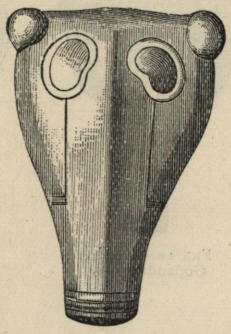


FIG. 16.—Fibula. Gotlandic type.

The old and ingenious Gotlandic workers in bronze did so. To see how they did it, we have only to direct our attention to Fig. 17—a very common type. The filled-up hole with its meaningless contour was converted into an animal's head, and as a head never exists isolated, it was necessary to give it a body, or at least something which could to the lively fancy of the people convey an illusion of the existence of a body. Consequently the head was provided with a long band or serpent-like neck, which sprang from the lower rim of the fibula. This neck and body

follow exactly the dividing line between the now enlarged arc and the likewise enlarged lateral band, which remained as a reminiscence of the original back-bent wire.

There is nothing in this either fundamentally new or added in a wanton way. What once had a meaning and afterwards lost it, had gained a new meaning according to the prevailing taste of the new epoch. In the meantime, as we shall see later on, a very considerable revolution in taste had taken place.

If we look again at the fibula Fig. 17, and compare it with the earlier type Fig. 12, we find a great difference. Fig. 12, especially

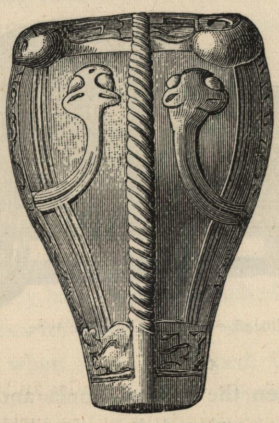


FIG. 17.—Fibula. Gotlandic type.

if we keep in memory its preceding type, closely resembling Fig. 10, consists of narrow band-like pieces. Fig. 17 shows a broad surface. This change in the general aspect necessitated changes in the details. The terminating knobs had of course, in the earliest stages, their bases turned towards the centre of the cross arms. In the broad and extended fibula those end knobs have their places in the two corners, and at the same time their bases have been directed downwards. The Teutonic tribes, and the Gotlanders not less than others, had a great horror of

a plain surface, when it could without difficulty be covered with ornament. They instinctively felt that a circumscribed surface should appear to the eye to be really circumscribed, whereas they abhorred everything that was flat. For this reason they provided the transformed fibula with a perpendicular rim, which in the course of time became gradually broader, and sometimes acquired a peculiar ornament of its own.

It would be too tedious to follow this through all its transformations. I will only call attention to Fig. 18, representing one of the later types. The end knobs are converted into upright plates.

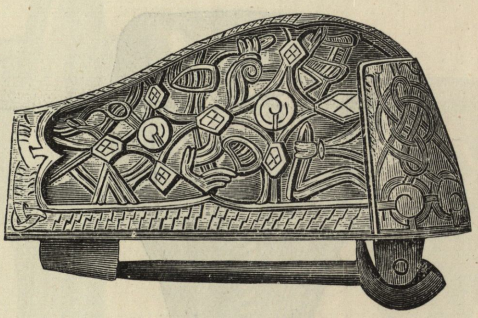


FIG. 18.—Fibula. Gotlandic type.

The boundary between the original fibula and the later perpendicular rim has disappeared and the entire surface is covered with a network of fantastic animals. The fibulæ of this class are usually described in the archæological terminology of Scandinavia as having the shape of a boar's head. We have seen, that at the first there was no intention to reproduce the head of an animal, but it is possible that in the course of development the fibula may have struck the fancy of some one as having some likeness to the head of the animal, which, as belonging to the god Freyr, enjoyed a certain degree of holiness.

We have now followed the principal stages of a development, which has gone on through many centuries. A specimen of the

last stage of all is not given here. While the principal features are the same as in Fig. 18, we find, instead of clearly-defined ornamentation, coarse and irregular lines running in different directions. The result is a complete degeneration, not worthy of attention, and which is not relieved by the sight of new types springing up to take the place of the decaying ones. It is useless to speculate how a new departure would have been possible and what character it would have assumed: we have arrived at a point where the funerary deposits forsake us, as Christianity is dawning over the country.

If we compare the fundamental type and the last one here figured we cannot but see that, taken as a whole, the first (and perhaps also the second) are the best. In the last the ornamental part has been too much favoured at the expense of the practical element. It is a complete mistake to make a fibula so heavy, that the stuff in which it is set must be so coarse as not to be liable to rend.

But if we look away from this final failure, we are able to understand how in their details the changes have been worked out, and we shall see that they have been determined by laws which also affect other branches of art. I do not assert, that the old Gotlandic smiths, when they developed this or other types, had the least idea of what they did. There is an immense disparity between the old time with its *naïveté* and the present one, which is over-saturated with learning: in selecting from models of all ages and of all nationalities, as we are able to do, the vacillating character, inseparable from all eclecticism, cannot be avoided.

The relative age of the different stages in the series here described cannot be the subject of dispute. It is, however, difficult to apply to them the data of accepted chronology without entering into elaborate calculations, which at this moment have to us only a subordinate interest. With sufficient certainty we can say, that the history of the development of this fibula covers about five centuries, of which Scandinavian history has only some isolated notices

to give us. During almost the whole of this long period the English had already professed Christianity. In Scandinavia, as in Denmark, the number of pagan centuries of industrial art is much longer than in other parts of the Teutonic world. While in other countries, our means of gaining an accurate knowledge of popular art disappear when the people were converted to Christianity, in Scandinavia we have excellent opportunities of pursuing the study of Teutonic art over a very extended period. From this circumstance, the Scandinavian antiquities and the study of them have more than a national interest. They give us some very valuable lessons concerning the development of Teutonic art, and of human civilisation in general.

I saw in the British Museum twenty years ago one of these boar's-head fibulæ. It had come from Livonia; and other specimens of the same origin are to be seen in the museum at Dorpat. But in Livonia these fibulæ are not indigenous; their presence there is due to the intimate relations between Gotland and Livonia, at the time when Oriental silver had found its way to the eastern shore of the Baltic and over the sea to Gotland, where many thousands of Mahomedan coins have been discovered.

From these preparatory remarks we return to the consideration of the last period of the earlier Iron Age of Scandinavia. I use here the word "earlier" in a true archæological sense, not reckoning exclusively by centuries, as an historian does. An archæological period is the time of a certain well-defined group of archæological facts, all closely related as possessing an analogous and all-pervading character.

We need not as yet discuss what constitutes the difference between the earlier and the later Iron Age of Scandinavia. For the present we are entirely occupied with the earlier of those periods.

I interrupted the exposition of the chronological changes which the Scandinavian iron age underwent when I mentioned the Roman

influence, or to be more precise, the influence exercised by the civilisation that existed in the northern provinces of the Roman empire. The empire was overthrown, and its territories were invaded by those whom the Romans called barbarians—and I have sometimes in the preceding pages used this name in its classical sense—men who, still rude, were mighty in a power of development, destined to surpass the highest mark attained by Roman civilisation.

The epoch of the Teutonic migrations, the internal history of the earliest States, which were the results of these migrations, and the friendly intercourse between the different branches of the Teutonic race, are unhappily still involved in considerable darkness. Archæologists, in pursuing their studies address themselves in vain to historians for the explicit notices they need. This deplorable state of things will not improve until archæologists and historians work together.

One fact which history does not reveal is clearly established by archæological researches, the intimate relations between the Scandinavian people and the Teutonic tribes, who founded states within or closely adjoining the territories of the Roman empire.

We return to the period of the Gotlandic civilisation characterised by the fibula represented in Fig. 12. Together with fibulæ of this kind which decidedly are northern, we find objects that reveal the closest affinity to others found in cemeteries of the western Teutonic world.

As I have here to tell of what is especially and characteristically Scandinavian, I will not dwell on what Scandinavia has in common with other Teutonic tribes. But still, to obtain a good starting-point, it is necessary to give some attention to these analogies. I give here some figures, and will make some remarks upon them.

In the Teutonic art of ornamentation patterns borrowed from the animal world have a very prominent place. Those

ornamental animals are never realistic; they have always some conventional shape, depending on the taste and on the general civilisation of the epoch and the race. Animal heads meet our eyes everywhere, but, as I have already remarked, a head cannot exist without having a body; as to the nature of the body, however, the ideas were very liberal. Sometimes the object, which was treated in an ornamental manner, was made to serve as a body, and a protruding part readily assumed the shape of a head, as we have seen in Fig. 11. Sometimes the head was not an excrescence of the object it ornamented, but was figured on its surface, or was the real object itself. In this case a body was felt to be indispensable, but as to the shape, it was in the highest degree vague, even the slightest representation of a body sufficed.

We frequently see a body consisting of a simple band, generally curved, but often this was doubled.

A specimen of these two practices is given in Fig. 19, a fibula consisting of a flat curved band-like body provided with two fantastic heads. The original was found in Gotland; the same type however has often been found in the Frankish cemeteries.

But the last-named tendency did not even stop with two heads. Three or four produced a richer effect, and to get them it was only necessary to subdivide the body.

When a Teutonic smith chose this pattern of heads, two, three, or four, for a fibula, he let them either retain the original contour (as in Fig. 19), or filled the angles, the surface thus gaining the regularity of a geometrical figure. Such is the case with the Gotlandic circular fibula, Fig. 20. The same type occurs in the ancient cemeteries of Western Germany. The specimen here given is not one of the oldest; the heads are already in process of dissolution.

Of very common occurrence in Teutonic finds is a large fibula consisting of two pieces, one of them generally rectangular or semicircular, the other oval, or, more often forming several lobes,

both united by an arc. Some of the most simple specimens have been found in the Crimea; and engravings of them have been published by Dr. McPherson. Probably we may attribute them to the Goths, who lived there for some time. There is no type more characteristic of the epoch of the Teutonic migrations and of the earliest Teutonic states; we find it everywhere and in numerous varieties—in the valleys of Transylvania, on the plains of Hungary, in Northern Italy, in the districts of the Alamans, Burgundians, Franks, Anglo-Saxons, in Denmark and Scandinavia. If one wishes to form a just idea of the power of Teutonic art to

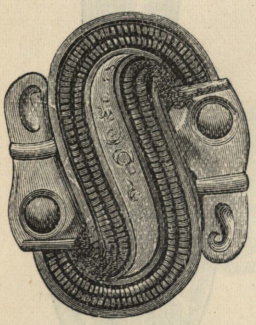


FIG. 19.—Gotlandic fibula.

FIG. 20.—Gotlandic fibula.

give to the development of one type the richest variety, a more fitting group for study cannot be found. In my *Contributions to the History of the Fibula* I have illustrated it with no less than forty-four figures. Here I can give no more than a sketch of the various forms found in Scandinavia.

In Fig. 21 we have a very rich pattern. The head appearing in Fig. 11 recurs here, but four times instead of once. Twelve birds' heads, treated in a conventional manner, spring from the rim of the two terminating lobes. This fibula, found in the island

of Öland, is of silver, partly gilt, and partly ornamented with *niello;* the eyes are of coloured stones.

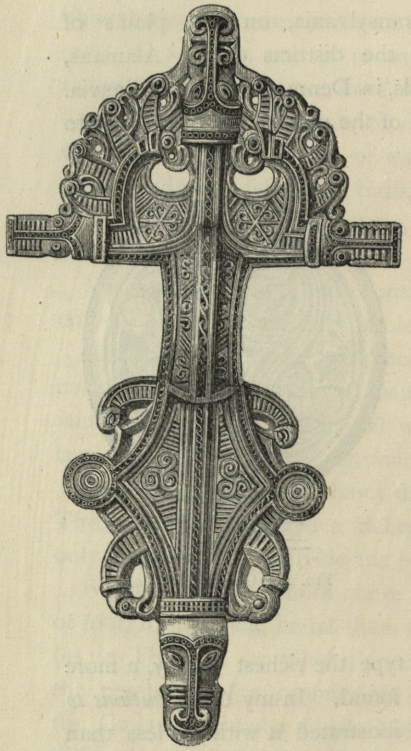


FIG. 21.—Fibula of silver found in Sweden.

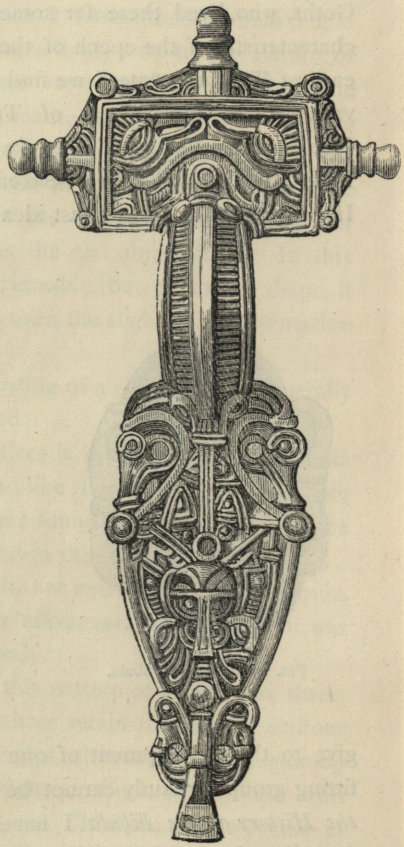


FIG. 22.—Fibula of silver found in Norway.

A fragment of another fibula, nearly related to this, has been found in Gotland. It is of high interest, as bearing a Runic inscription; this is also the case with some of the fibulæ found in Germany.

A Norwegian specimen is given in Fig. 22. The variations are not considerable. The knobs of the rectangular lobe are more simple and resemble those of Fig. 11. As there, we have only one terminating head, but it has climbed up towards the middle of the other lobe, where it has taken an almost central position. The two pairs of animals' heads of this lobe are retained. The original is of silver gilt.

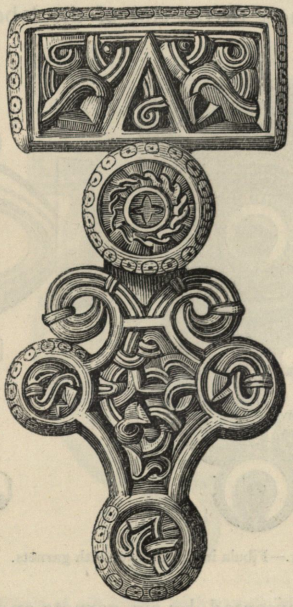


FIG. 23.—Fibula in gilt bronze. Northern Sweden.

Another variety belonging to Northern Sweden, and represented by Fig. 23, announces a late stage of development. The rectangular lobe has lost its knobs, and the ornaments of the interior are reduced to *membra disjecta* of animals. The arc is concealed by a circular disc—as in the fibula, Fig. 10. The other lobe has lost its lower pair of heads, and the uppermost pair have

not kept much of their original character. The original is of gilt bronze.

In Gotland the development of this fibula took a different turn (see Fig. 24). The rectangular lobe, as in Fig. 23, is completely free from appendages. The arc has a disc, but it is much wider than in that example. The greatest difference is shown in the inferior lobe, of which the two lateral projections have disappeared, while the upper pair of animals' heads has been more developed, and prolonged almost to the end of the lobe. The original is

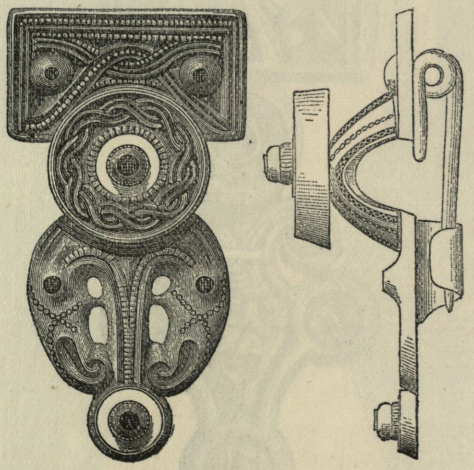


FIG. 24.—Fibula in gilt bronze, with garnets. Gotland.

of gilt bronze, ornamented by six garnets and circular pieces of bone in the centre of the disc at the top and at the lower end.

Fig. 25 shows another specimen from the same island, a little later and more plain, as the more extended surfaces of garnets and bone do not sufficiently compensate for the ornamental designs, of which they have usurped the places. We shall again meet with this Gotlandic fibula, at a somewhat later period, and shall find it more richly and gracefully ornamented, but the same tendency

to make the body of the fibula too large and inconveniently heavy will still be evident.

I have already mentioned the custom prevailing in Teutonic art to double a *motif* which had struck the popular fancy. In Scandinavia we find that this also occurs, as is shown by Fig. 26. The original, found in Central Sweden, is of silver gilt ornamented with niello and two circular pieces of coloured glass. Here we find the two terminating heads in a state

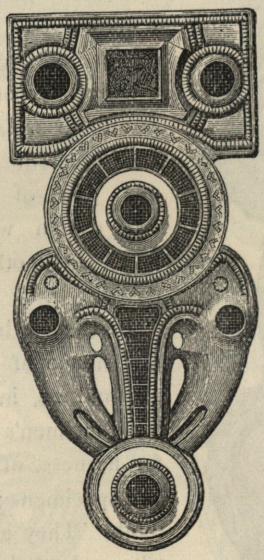


FIG. 25.—Fibula of gilt bronze, with garnets, etc. Gotland.

of dissolution; in reality they no longer form the ends, as the whole is surrounded by a rich border of incomplete and maimed animals.

The figures here given (19–26) represent the connection between the art of the western Germans and that of the Scandinavians. The fully developed golden bracteates (see Figs. 8 and 9) belong to a portion of the same age. At the same time the fibulæ here

mentioned are perfectly characteristic of the period with which we are now occupied, or the last stage of the earlier Iron Age. To give a clearer idea of this wonderful period—one of the most interesting in the history of Scandinavian art—I will add some figures and explain their relative position and their qualities by a few brief remarks. In finds belonging to this period we do not meet with identical types in all parts of Scandinavia. Analogies and affinity are apparent everywhere, but in one part of the vast territory one design was more preferred, and in other parts, other designs.

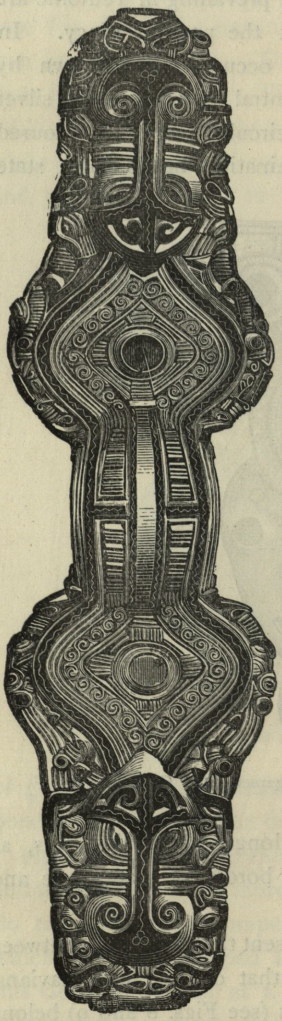
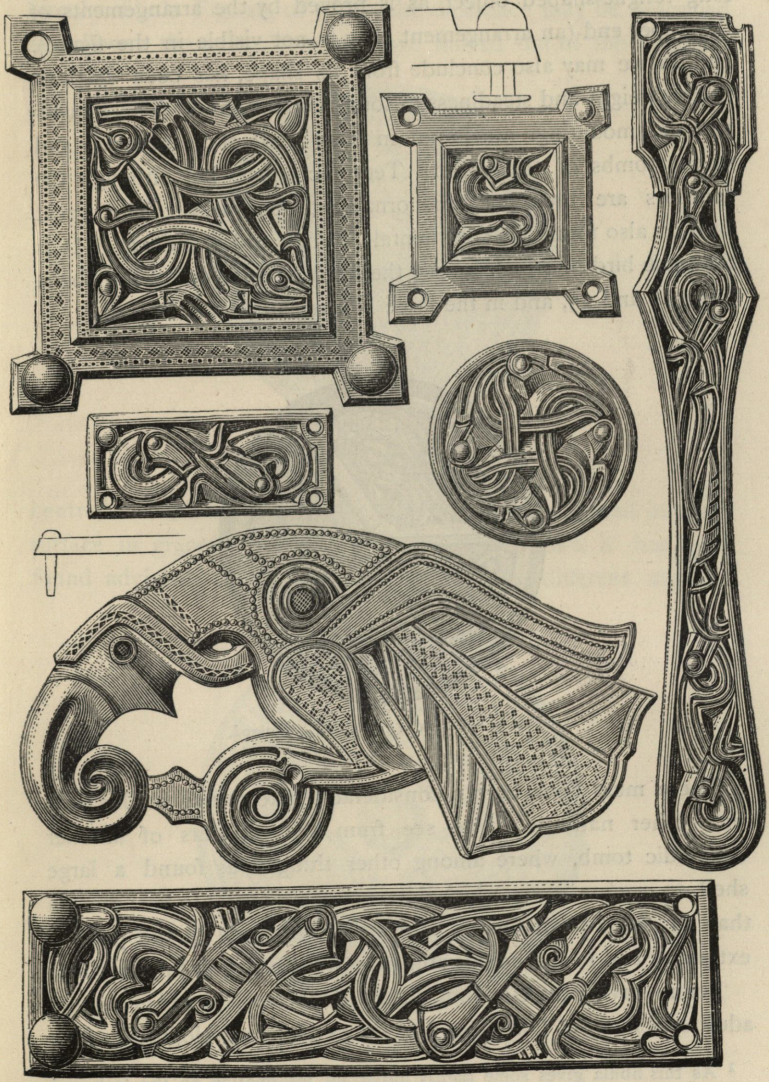


FIG. 26.—Fibula of silver. Found in central Sweden.

In the Gotlandic cemeteries, we find fibulæ of the types, Figs. 12, 19, and 20, in graves of females; and in men's graves, ornaments for harness, of which Figs. 27–32 are specimens; all from the same tomb. They are of bronze, richly gilt, and their golden splendour remains untarnished after a repose of many centuries in the soil. The rectangular pieces belong to the reins. The round and quadrangular have been placed at the junctions of two straps. It is possible that the bird-figures have been placed in the same way. The



FIGS. 27–32.—Part of harness in gilt bronze. Gotland.

long tongue-shaped object, as is proved by the arrangements of the upper end (an arrangement that is not visible in the figure), and as we may also conclude from its shape, has been destined to give weight and steadiness to some hanging strap. These quadrangular mountings are found in other parts of Scandinavia and in the tombs of the western Teutonic tribes, but although the contours are the same, the ornamentation varies. The great bird is also found in continental Sweden and in Norway. It is the same bird of which we see the head at the sides of the fibulæ Figs. 21 and 25, and in the large Norwegian buckle Fig. 42.

FIG. 33.—Fibula in gilt bronze. Gotland.

There must have been a considerable intercourse at this time with other nations, as we see from the contents of another Gotlandic tomb, where among other things was found a large shell, an *ovulum ovum*, which does not occur nearer to Scandinavia than in the Indian Ocean. A hole was made in the pointed extremity and in the hole is still fixed a little ring of bronze wire.

Before leaving the Gotlandic group of this period I will give some additional figures. One (Fig. 33)[1] shows a later development of the

[1] As this fibula gives some highly important information on the technical procedure of the old Gotlandic smith, I will return to it later, especially to its perpendicular rim, of which a representation is given, Fig. 113.

circular fibula Fig. 20, of which the difference may be described as follows: the animals' heads have moved out of the common

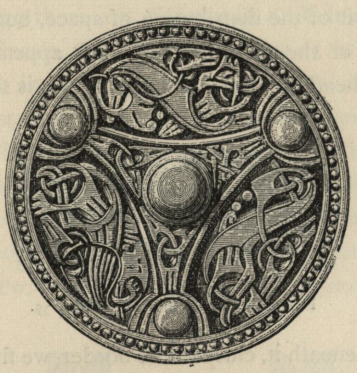


FIG. 34.—Fibula in gilt bronze. Gotland.

centre, and the whole body being free, they have spread over the surface in graceful windings. At the same time, it has been found advisable to put barriers between the different animals.

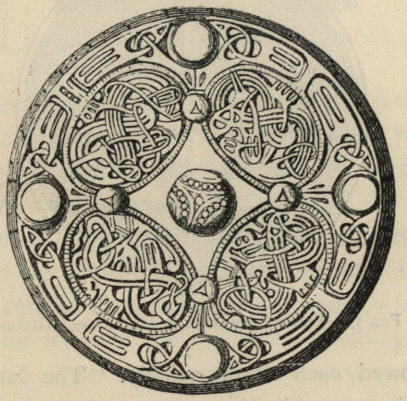


FIG. 35.—Fibula in gilt bronze. Gotland.

To discover the animal character it is necessary to begin by looking out for the fragmentary head discernible by the great eye close

to the one central starting-point of the three bars. In Figures 34 and 35 we have specimens of a continued evolution resulting in a development of the distribution of space, but at the same time in a dissolution of the animal *motif* which appears a little clearer in Fig. 36; the head, this time without an eye, is seen in the centre,

FIG. 36.—Part of the rim of Fig. 35.

and above and beneath it, close to the border, we find reminiscences of a pair of feet. The difference between these types and that of Fig. 20 is so great that we must suppose them somewhat separated in time. But in this period of great activity in art-development

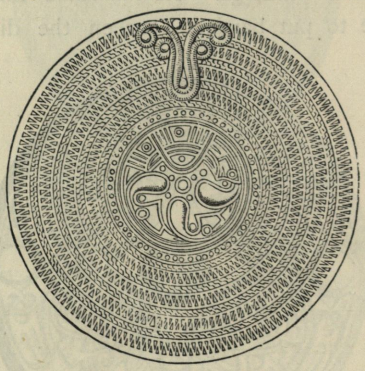


FIG. 37.—Personal ornament in gilt bronze. Gotland.

changes followed each other quickly. The latest specimens here given (Figs. 35 and 36) are not much later than the fibula Fig. 17.

For comparison only I figure here a bronze bracteate, Fig. 37, with simple stamped ornaments and a central representation that

offers some analogy to the heads of Fig. 20; and some cylinders, Fig. 38, which were arranged on a thread to form a collar.

Some years ago there was discovered at Ulltuna in the neighbourhood of Upsala the tomb of a warrior, whose corpse had been deposited in a boat. A river flows beside the place, but still it must have required considerable labour to transport the boat from the water up the steep bank. Other interments in boats are known in Scandinavia, and some tombs are found there which have the contours of a ship with high stone pillars at both ends, and sometimes, in the interior, rows of stones indicating the seats of the crew. In the Scandinavian legends the custom of

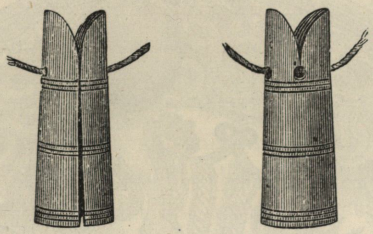
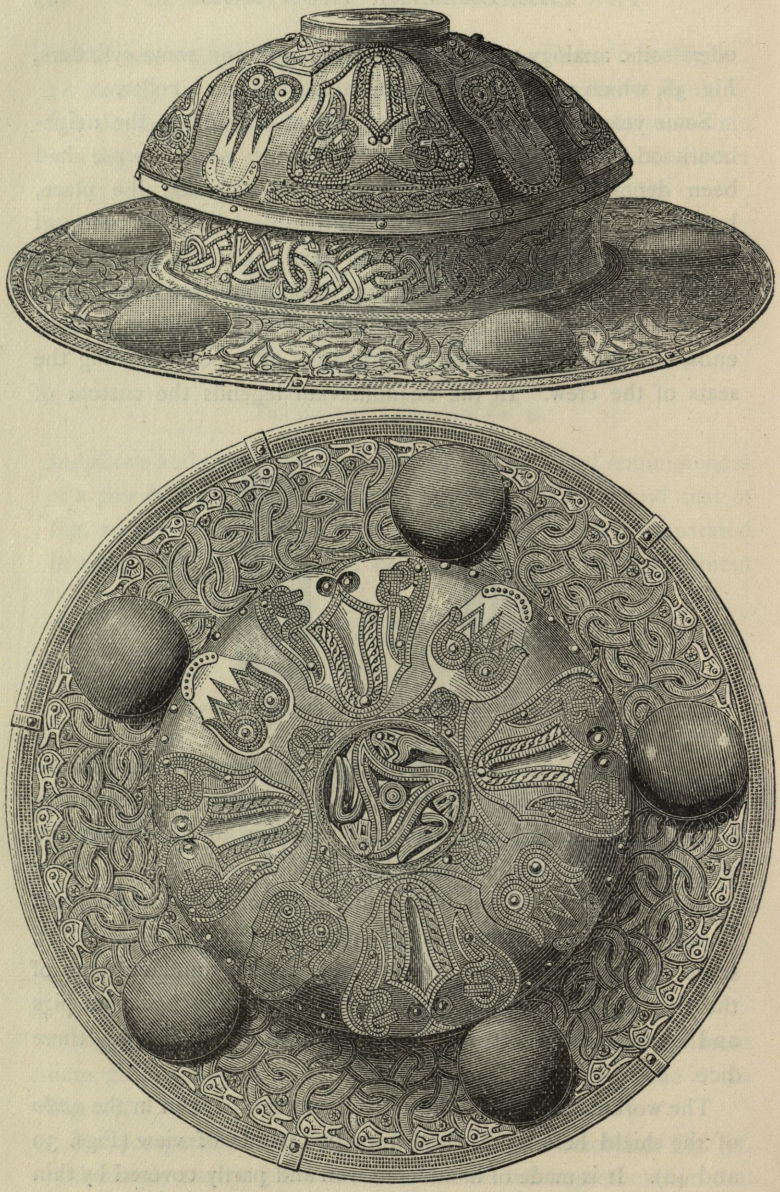


FIG. 38.—Bronze cylinders belonging to a collar. Gotland.

placing the remains of the dead man on board a ship is more than once mentioned. It is possible that we here see traces of the widely spread idea that the dead was to travel over the sea to the distant and unknown land of souls.

In this tomb at Ulltuna were found many objects, some of great importance as specimens of a high development of industrial art, some giving curious illustrations of the manners and customs of the time, as for instance, the cauldron containing bones of pigs and geese, and a set of draughtsmen accompanied by three dice.

The workmanship of the best specimens can be seen in the *umbo* of the shield here represented from two points of view (Figs. 39 and 40). It is made of hammered iron and partly covered by thin



FIGS. 39, 40.—Iron umbo, partly covered with pressed bronze. Ulltuna, central Sweden.

bronze plates with embossed ornaments. I need hardly call attention to the analogy between the top ornament and the Gotlandic fibula Fig. 20.

At old Upsala, where the town of that name was situated until the increasing filling up of the river in the thirteenth century made a removal to the present site necessary, are still seen some gigantic tumuli to which modern fancy has given the names of some of the pagan gods—in earlier time they were called the tumuli of the kings. Two of them have been opened, but without yielding any great number of antiquities; as the corpses in these cases have been burnt, the ornaments and implements placed with the dead were mostly destroyed by the action of the fire. Still so much remains that we are justified in attributing these mighty monuments to the time we are now discussing.

On the Scandinavian continent the Ulltuna find remained for a long time unique, but we have now well-grounded hopes of obtaining more light on this interesting epoch. Some workmen, while digging near the church of Vendel in the same province of Uppland, found last autumn a tomb, one of many which will be examined this spring. Here, as at Ulltuna, we have lighted on the remains of a warrior, whose deeds of prowess are entirely forgotten. The *umbo* is broken, but the top ornament is preserved and shows a distinct analogy with the circular fibulæ of Gotland; the surface is distributed in the same way as in Fig. 35. There were fragments of a helmet of iron covered with figured bronze, giving scenes of Scandinavian mythology. There was also found a magnificent sword-hilt of silver (see Fig. 41).

A long description of this masterpiece of ancient Scandinavian art is superfluous. The figure is sufficient to give an idea of it. I will only mention that the contrast between the richly ornamented parts and those less ornamented is in the original heightened by a difference in colour, the former being gilt, the other retaining the original colour of silver. The body of an animal, bent into marvellous windings, attracts our special attention by its large

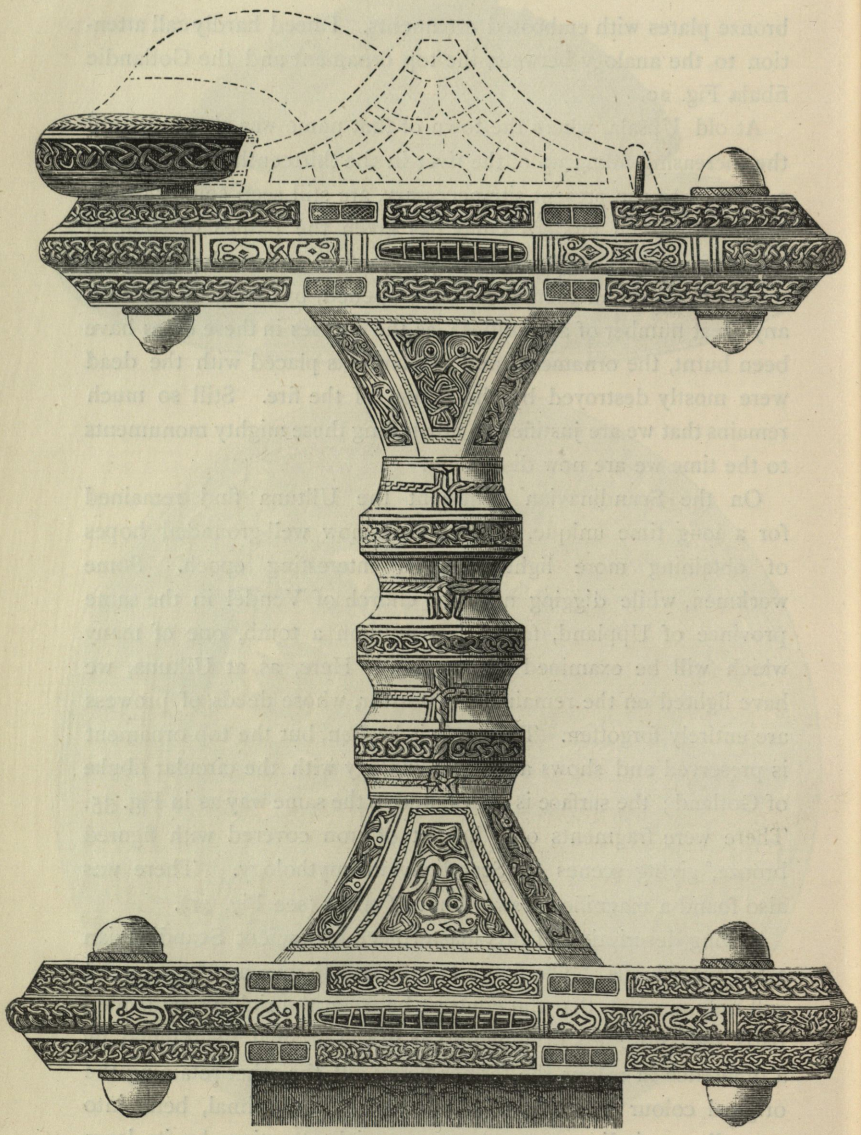


FIG. 41.—Sword-hilt of silver. Found at Vendel Sweden.

eyes, formed of two bright garnets; garnets occur elsewhere arranged in the usual manner of the *orfévrerie cloisonnée.*

The pommel is unfortunately lost, excepting the long piece that formed its base, and an excrescence which has been attached to

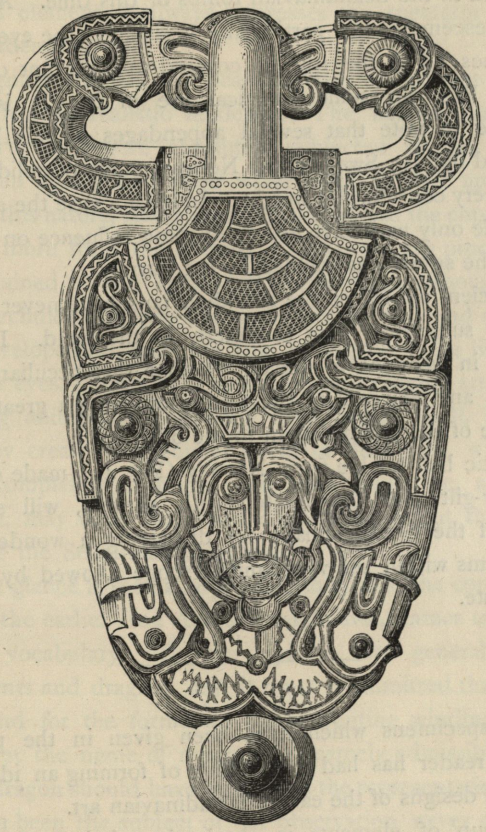


FIG. 42.—Belt-buckle of bronze and silver-gilt. Found in Norway.

one of its sides. I have given a sketch of the triangular pommel from another sword-hilt found in the same tomb. Of course it is not certain that the missing pommel was also covered with garnets;

neither have I intended to make a restoration, only to suggest *one* manner in which the pommel may have been wrought.

The appendage of the pommel needs some explanation. Sword-hilts with such an appendage, always on one side only, are very often found in the Scandinavian tombs of this time. As the one-sided excrescence is not particularly pleasing to the eye, although it sometimes, as in this case, is covered with elegant ornaments, we must look for some practical use in it. It is also of importance to note that several appendages of this kind have been found both in Sweden and Norway, made of solid gold and having a very considerable weight. In such a case the appendage on one side only may have exercised some influence on the mode in which the sword was wielded by the warrior.

The ancient swords of the Scandinavians have never very long hilts, only sufficiently long to exactly fit the hand. I leave to specialists in weapons to decide whether this peculiarity of the hilt will in any way explain the custom of giving a greater weight to one side of the pommel than to the other.

A gigantic belt-buckle from Norway (Fig. 42), made of bronze and silver-gilt and ornamented with garnets, will show the capacity of the Scandinavians for displaying a wonderful richness in forms within the very limited scope allowed by the then popular taste.

In the specimens which have been given in the preceding pages, the reader has had opportunity of forming an idea of the ornamental designs of the earlier Scandinavian art.

One group of elements is absolutely missing—that of the vegetable kingdom. It appears in Scandinavia for the first time, when the mediæval art of Southern and Western Europe entered it with Christianity.

Geometrical ornament is of course not wanting; it occurs

everywhere and at all times, but, as I have already remarked, it is from animal patterns that Scandinavian ornamentation derives its true character. This pattern is very common and covers the larger surfaces, and, when it is intermixed with the geometrical element, it always impresses the spectator as being the preponderating one.

In designing animals the Scandinavians took great liberties. Their art has no realistic tendency. The natural qualities of the animal's body were absolutely subjected to the demands of the given space, and even when there existed no pressing demand of this nature, changes were made, so that the copy deviates more and more from the original. This arbitrary proceeding is easily explained. The ancient Scandinavians, although highly skilled in technical respects, and possessing a richly and characteristically developed art, were not able to reproduce the living form before their eyes. They were no proficients in higher art. But in reproducing animals, not directly from nature itself, but from copies, they created an animal world of their own, with which they felt completely at home, and from which we, men of a critical age, may draw important conclusions about the general qualities of the Scandinavian genius.

At a first glance it seems impossible to give to the conventional animals of the earlier Iron Age of Scandinavia, names taken from the usual vocabulary. Popular opinion has generally called them serpents and dragons, and it must be admitted that there is some ground for the former in the serpentine windings of the bodies. Yet the name of dragons is scarcely admissible, as the European dragon should have wings, and the representation, which, thus far has been the subject of our observation, never shows the least trace of them. The idea of dragons was apparently in the earlier epoch quite foreign to the Scandinavian mind, although at the present day every peasant will tell legends of dragons. The Scandinavian word for dragon is borrowed, and does not appear until very late in old northern writings.

But even the name of serpent must be discarded. The serpentine windings of the animals appear first in a later period of their existence. The further back we go the less obvious is the likeness to serpents. To get a just idea of what the ornamental animals were meant to represent, we must have recourse to their very earliest appearance.

We shall then make the astonishing discovery, that the animal whose shape has given origin to the fantastic and varying world of ornamental animals of the earlier Iron Age is completely foreign to Scandinavia, as well as to the actual climate of Europe. It is the lion *couchant*, so often appearing in Roman art, which has been adopted by the Teutonic tribes, even in the far north, and remodelled after the exigencies of their taste.

FIGS. 43, 44.—Animal ornamental patterns: corrupted figures of lions.

I reproduce here the designs of a gold sword pommel found in Sweden (Fig. 43), and a part of a great fibula from Denmark (Fig. 44). In the first case, we are able to recognise a barbarous reproduction of two lions *couchant* with their heads turned towards each other. That they are lions is proved by the tail turned up over the back. To an eye accustomed to this figure, it will not be difficult to find the same representation in Fig. 44; the space allotted to the figure has made it necessary to adopt a most unnatural contortion of the body. We see the head and the neck with its mane, and one of the fore-legs. As the hind-leg could find no place beneath

the body it has been turned upwards. The tail projects above the head. It would have been impossible for any generation of artists to treat an animal figure with such freedom had they been copying a real animal always living before their eyes, instead of another figure that had seized their fancy, being very common in a higher art than their own, and with which they had been brought into very intimate contact.

We will now follow this remodelled lion in its later transformations. As yet we have not got beyond the stage where we

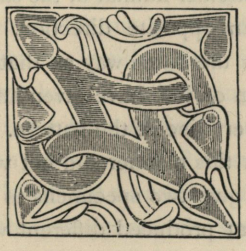


FIG. 45.

FIG. 46.

FIG. 47.—Animal ornamental patterns: corrupted figures of lions.

observe rude imitations still giving us some idea of the original representation. In pursuing our study we now enter the field of free transformations which it would be impossible for us to understand if the earlier barbarous imitations did not furnish the connecting links.

I would direct the reader's attention to Fig. 45, taken from a quadrangular bronze plate found in Gotland, and belonging either to a belt or the caparisons of a horse. It is of the same age as

the fibula, Fig. 21, and the sword-hilt, &c., Figs. 41, 42 and 44. A close observation of these fantastic figures will show a pair of animals, and, from what we have seen in two former cases, we may venture to call them lions *couchant*. We see in one of the lower corners a hind-leg, with a foot reduced to four lines; looking to the right, we see the curved body continued, until in the opposite corner it sends out a fore-leg, doubled up in a truly un-leonine manner; it is then continued by a curved neck, ending in a head, in a style which is exceedingly common in the ornamentation of this epoch. To fill up the space, another animal of the same kind has been added, but turned in an opposite direction. In the original, the design is executed in the same way as that in Fig. 21; to convey a clearer conception of it I have given an outline reproducing with perfect fidelity every line of the pattern.

But the type which originated in this manner did not very long retain its characteristic design. I give two specimens to show in what way the continued debasement produced different varieties, all or most of them possessing vitality enough to remain in use for a certain length of time, and forming many sub-varieties. These two specimens, Figs. 46 and 47, are also taken from Gotlandic originals. In the first, the two animals have become four, and space has been obtained for the greater number by simplifying the original representation. The four corners are occupied by four heads, from each of which issues a bow-shaped body of the simplest description; it seems to be abruptly broken off, but, in reality it is continued on the other side of the body of another animal, crossing it, by a leg and a foot, which with its many toes is properly turned downwards. Fig. 47 shows still further debasement. The head, having become greatly developed immediately attracts our attention, and we are obliged to follow it to discover what is intended to represent the body of the animal. There are four heads in the original, but I have not thought it necessary to give more in the illustration than was required to represent one of the heads possessing a complete body. With a little patience we

find first an appendage to the head, very long, slightly bent downwards, and with a recurved end, next a band representing the neck, then a fore-leg, much transformed, and at last the band-like body, which ends in a hind-leg deprived of its lower part and of the foot.

As to the ultimate fate of this development there can be no mistake. It is a development irresistibly becoming debased, and therefore it is doomed. For Scandinavian art there was no help, excepting by the introduction of some new pattern, when there would be a slight chance that through the general elevation of the art provoked by such a new influence, a new life might be instilled even into the old and decaying pattern which we have been studying.

The inhabitants of Scandinavia having received Roman coins and many products of Roman industry, as I have already mentioned, it will not surprise us if a design, common in Scandinavian art at that, comparatively speaking, early time, can be traced back to a Roman original.

There is one Swedish find which throws a very strong light on this mixture of Roman and indigenous patterns. In the royal tumulus at old Upsala, opened on the occasion of the meeting of the International Prehistoric Congress in Sweden in 1874, there were found, *firstly*, a piece of bone on which were deeply carved animal shapes resembling, as to arrangement, those in Fig. 46, and undoubtedly of Scandinavian origin; *secondly*, a very diminutive circular disc, of a material, the nature of which is difficult to determine in consequence of the damage it has suffered from the funeral fire, but having upon it in relief a little amorino, winged and blowing a horn. The subject does not enter into the world of old Scandinavian ideas, it is classical, and the execution, sufficiently bad to be attributed to a very degraded provincial art within the Roman Empire, is still of a kind which cannot be considered Scandinavian.

If we are to judge by the nature of the ornaments, and by the

conventional and contorted forms of the animals, we may draw the positive conclusion that a higher art was absent in the early period of the Scandinavian Iron Age. But even in this case we must acknowledge the correctness of the old saying: No rule without its exceptions.

At the very end of this early period we meet in Sweden with some objects which convince us that the Scandinavians of this time had some aspirations to become proficients in higher art. In a cairn, in the Isle of Öland, four bronze plates have been found, the upper sides of which are occupied by figures of men and animals: two men going in a solemn procession; a man in a very critical position between animals standing on their hind-legs, seizing him with their fore-paws and licking, or perhaps devouring, his abundant hair; the man is stabbing one of these animals with his sword, and holds in the left hand a dagger probably intended for the other enemy. On a third plate is a man, whose head is covered by a curious two-horned helmet; he is armed with two spears and a sword, and is running away from another man, who is in the act of drawing his sword out of the scabbard; this man has not a human head on his shoulders, but as it seems to me the head of a wolf, and behind his back the tail of an animal is protruding. The fourth shows us a horned animal, sitting on its hind-legs, with the tongue sticking out of the mouth and a rope round the neck; a man, with no garments but a pair of breeches, keeps the rope in his left hand and holds a hatchet in his right. Is he going to kill the animal, which is larger than himself, and which he seems to approach with a good deal of fear? Two of these men, whose faces are uncovered, have the upper lip ornamented by a strongly-marked moustache.

As these figures have been reproduced very often, it is unnecessary to give them here, the more so as they are not ordinary products of an industrial art, but, on the contrary, are to be regarded as essays of a higher art. However, as such essays are of

value for our actual purpose, in illustration of the general condition of a period of which the industrial art is of a very great value, I add here, out of the find from Vendel, a figure (48) that has all the relish of novelty, viz. a cavalier armed with a circular shield and a heavy spear. He is preceded and followed by a bird, and met by a serpent, raising itself to sting the horse in one of the fore-legs. It is only just to add, that the four groups already mentioned are a little better executed.

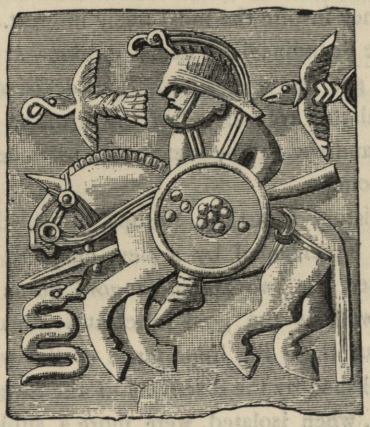


FIG. 48.—Mythological figure in embossed bronze.

There can be no doubt that we have here before us a mythological subject, and I presume that the correct explanation is to be sought not very far off. The horseman is Wodan, who, according to the Scandinavian legends, had a heavy spear and was attended by two ravens, who brought him news from all over the world. The serpent, attacking the horse, reminds us of the mythological *midgards*-serpent, or the serpent encircling the central world, the implacable enemy of the gods.

As in the Eddic legends, this serpent appears as the special opponent of the god Thor, not of Wodan, it seems probable, that

there was some difference between the legends told towards the end of the earlier Iron Age and those of the epoch when Christianity commenced to enter Scandinavia. The spear and the birds were probably during all the time attributes of Wodan, although it is quite possible that the birds originally had another function assigned them than to carry news. They may only have been the followers of the God of Battles, as the bodies of the fallen warriors would give them an abundant feast.

That these representations are indigenous cannot be disputed, and, as such, they inspire the most lively interest. The art is not higher than the Scandinavians could produce at that time, when once they had got the suggestion. The decisive proof of their origin is that almost every detail of the costume can be demonstrated as Scandinavian by reference to several finds from Scandinavian tombs.

The early history of art in Europe, must, thanks to these Swedish finds, be enlarged by a new chapter; in which must also be discussed the two Jutlandic gold horns found in 1639 and 1734, as well as the gold bracteates already mentioned; but even without these the importance of the whole group has been fully established by the discovery of the Swedish specimens. The gold horns, when isolated, were more a subject of curiosity than of study, and as both they and the casts taken of them have unhappily been lost, it has been a little hazardous in judging them and their art, to depend upon engravings made at a time which did not possess the critical faculty of the present day, nor the necessary undeviating fidelity to the true features of the original that had to be copied. As to the gold bracteates, the connection between them and the Roman medals is too evident to allow archæologists to see in them works resulting exclusively, or even chiefly, from an indigenous art of the Scandinavians. The figures of the Ölandic plates and of the Uplandic helmet leave no doubt as to the right interpretation of the group.

THE LATER IRON AGE IN GOTLAND.

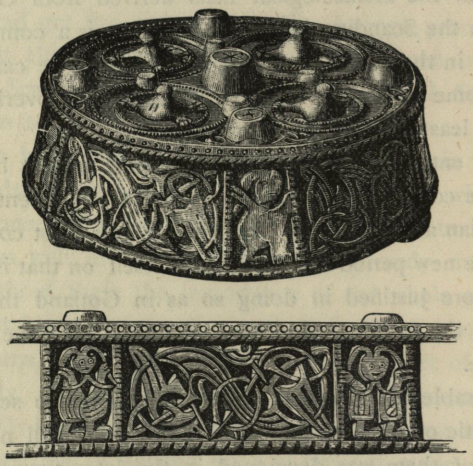
BETWEEN the archæological facts derived from Gotland and those from the Scandinavian continent there is a complete correspondence in the earlier Iron Age. Of identity we cannot speak, because some provincial differences cannot be overlooked, but there is at least an evident analogy.

We now enter a period of which the same cannot be said, and as we have commenced giving a great deal of attention to the Scandinavian art as practised in Gotland, it is most convenient to observe the new period as it developed itself on that island. We are the more justified in doing so as in Gotland the principal features of the earlier period were continued until the end of the pagan time.

Considerable attention has already been given to several types characteristic of the Iron Age of Gotland. We will now observe how each of them was developed in the later time, which here was characterised almost exclusively by the introduction of new ornamental *motifs*.

The simple fibula, Fig. 10, of which the principal elements were the pin and the bow-shaped appendage, preventing the pin from slipping out of the garment, developed itself through several phases, which we have already discussed. The different stages of the development have been figured in the preceding pages, except the last one, the coarsest of them all. About this group I need not say anything.

We have seen how the fibula, consisting of a circular disc, with the pin attached to the inner side, gradually developed itself into what, in the terminology of the northern archæologist, is called the box-shaped fibula. As the simple fibula got the shape of the boar's-head fibula by a gradual elevation of the rim, so in exactly the same way the circular fibula became in course of time more abruptly elevated. It lost its original graceful outline and became, in its general appearance, coarse and heavy; at the same time much attention was given to the details, which still show good taste and a great deal of technical skill.



FIGS. 49, 50.—Box-shaped fibula (Gotland), with details.

At first we do not find a great difference. I would direct the attention of the reader to Figs. 49 and 50, a box-shaped fibula, not very different from those of which the upper surface has been figured in the preceding pages, but only a little higher. But, if we subject it to a closer scrutiny, we find some quite new elements. I will not speak of the upper surface, occupied by four circles as in Fig. 35, but ornamented in quite a new way. It suffices for us to study the sides, where we see, in Fig. 49

one, and in Fig. 50 two, rectangular spaces occupied by the well-known serpentine pattern of Fig. 36, but much more debased; it is now quite impossible to find either the head or the tail. In elevating the fibula, it was felt necessary to arrange the side in such a way as to convey a certain air of strength. In the space left on the border between the four circles in Fig. 35, we see four knobs, apparently placed there that not even the smallest space should be left unoccupied. These knobs, being the most prominent points on the outside of the surface, gave a clear indication of the spots where the supports of the side ought to be placed. We see them in Figs. 49 and 50 in the shape of small upright panels, each filled with the figure of a man, very barbarous, it is true, but, still, natural in comparison with the almost completely debased serpentine figures in the adjoining spaces.

The signification of this type in the long series of development will be better understood if we now give our attention to the large fibula, Fig. 51, here reproduced in its original size. The article is, as every one will see, unpractical in the highest degree. If we look back on Fig. 25, the change effected in the course of time is easy to observe. Every part of the original fibula has been exaggerated, as is best seen in the top-ornament, which, though a comparatively small appendage, is too large to be, from a practical point of view, a fit safety-pin. The arc is much larger, the rectangular end-piece is heavier, and at the opposite end the original animal's heads have almost disappeared. We cannot see more than the spirally-wound end of the beak or of the upper jaw; the eyes have been replaced by high cones covered with ornaments. This fibula has here been restored, but in a most conscientious manner, by following the clear indications still existing. When perfect it must have had a very brilliant aspect; the framing is made of gilt bronze, the large surfaces are filled with garnets, and the sides of the five hemispherical protuberances show a white chalky surface.

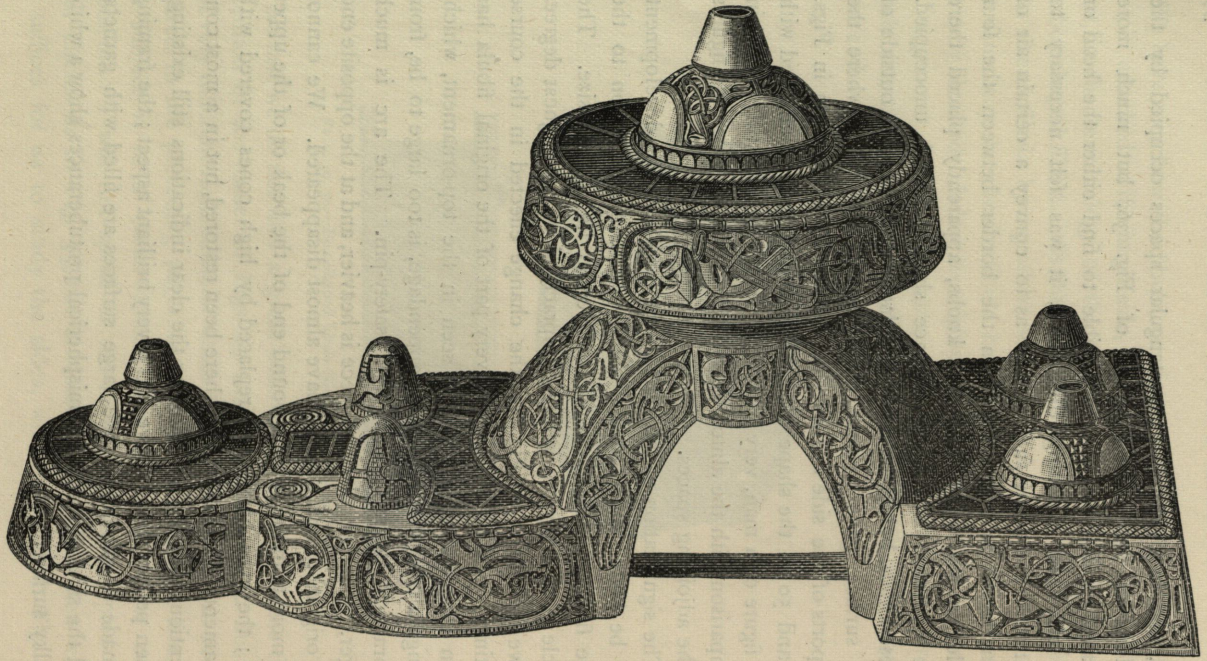
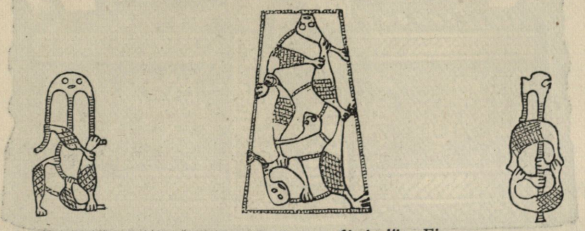


FIG. 51.—Fibula from Gotland. Gilt bronze, garnets, &c.

The Royal Historical Museum of Stockholm possesses three specimens of this type, the one here figured being a little better preserved than the others. Observing the ornaments, exhibited in Fig. 51, we shall find specimens of the already well-known pattern but in a very advanced state of dissolution. One of the other two specimens is more akin to the box-shaped fibula, Fig. 50, as we find on it, at the side of these ornaments, others of quite a new pattern, some of which are here reproduced, Figs. 52—54. It is not necessary to subject them to any discussion. Their principal character is quite clear. Figs. 52 and 54 show us a fantastic animal with curious appendages to the head and four legs; the feet—this is a principal point—are grasping some other part of the body. The central figure (53) gives us a more intricate pattern; here we see three heads, but I must leave it to the reader



FIGS. 52-54.—Details from a fibula like Fig. 51.

to find out the body belonging to each head. Even if an attempt in this direction should not be easy, one thing is quite clear: the feet of each of these animals are grasping some part of its own body or of the bodies of the two other animals. A misunderstanding is not possible; we have got a new element, which cannot in any way be connected with the pattern already known, and, although I have not been able to reproduce the old pattern in all its varieties, I have at least given its principal forms. Here is something new of which the explanation is to be sought. In what manner I reserve for further consideration.

Fibulæ of this size cannot have been common, as the Museum of Stockholm, otherwise so rich in Gotlandic antiquities, has

no more than three specimens, and in other collections, as far as I know, not another specimen is to be found. The rarity of this type cannot surprise us, it is curious indeed that such an unpractical, although splendid, fibula was ever made more than once.

Our wonder will be still greater as very large fibulæ of the same pattern, but somewhat varying in the details, have been found twice in continental Sweden, and several times in Norway. Their connection with the contemporaneous antiquities of the Scandinavian continent is as yet not quite clear, and, for that reason, I

FIG. 55.—Box-shaped fibula. Gotland.

will not attempt any discussion upon them, it would carry us too far away from our present purpose.

As a proof of the unpractical habits of the Gotlandic smiths, but at the same time of their honest desire to make something in every way solid and complete, I may mention, that even the reverse is ornamented, though it never could be seen when the fibula was in use.

We can now proceed in our study of the development of Gotlandic Art.

If we already have had occasion to be astonished, our wonder will be still greater on seeing another Gotlandic fibula of the box-shaped kind, here reproduced (Fig. 55). The first impression is that it is heavy. The upright part of it has been much, indeed too much, enlarged. The slender supports of Figs. 49 and 50, indispensable to the eye, but not exactly necessary for a practical use, have here the shape of wide posts, as in the latest stage of the boar's-head fibula.

The pattern is not very clear, an infallible sign of a far advanced decadence, but still on each side we can see a foot with three toes, and thence we must conclude, that originally each post had been ornamented with the figure of a man (see Fig. 49) or an animal. The side panels are occupied by a serpentine figure of a better design than in the specimens previously given. Of the upper surface not much is seen, and I will not in this instance

FIG. 56.—Top-ornament of fibula, Fig. 55. Gotland.

speak about its pattern, I will only mention the barbarously shaped animal which takes the place of the more original separating knobs.

When speaking of this really unpractical fibula, I have been a little ironical, but, let us fancy what a weight it must have been on the garment, and what a weight the garment must have been, if it was strong enough to resist the tearing influence of this implement, originally intended to keep it together! But still, to be fair to the excellent workmen, I might expatiate upon the rich and good workmanship here revealed.

The fibula itself is made of bronze, richly gilt; almost everywhere the gilding is visible. The four posts have the broad rims plated with silver, with lines filled with niello. The twisted pattern bordering the side panels, is treated in the same way. Beneath

and above these bordering lines are massive twisted strings of silver. The upper rim of the four posts shows the same twisted pattern in silver and niello. The central knob can be seen in Fig. 56, with a border of the same workmanship, and having raised bands of gold soldered upon the inner surface.

Fibulæ of this kind are not at all rare in the Museum of Stockholm, though it cannot boast of possessing exact duplicates, so many are the varieties in which this type appears. To give here an idea of this richness is not possible. I must restrict myself

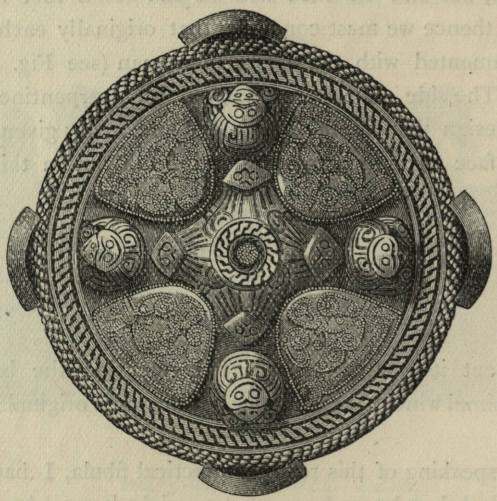


FIG. 57.—Upper surface of a fibula like Fig. 55. Gotland.

to reproducing (Fig. 57) the upper surface of another fibula of this kind: the four ornaments between the standing animals are made of beaten gold, with a pattern executed in filigree work.

But there is another feature, the under side of the brooches, which I cannot pass by without giving a figure (58), and saying a few words about, as it will give me an opportunity of showing how the pin was arranged.

I have spoken of the unpractical way of ornamenting the under

side of the gigantic fibulæ of which Fig. 51 is an example. We find the same fact here, and it is, in my eyes, more curious, because in this case the pattern has a greater intrinsic value. We see four gracefully intertwined serpents, treated in a conventional, but very characteristic manner. The head is singularly developed, with an oblong eye and an appendage hanging down from the upper jaw. To obtain a more intimate connection between

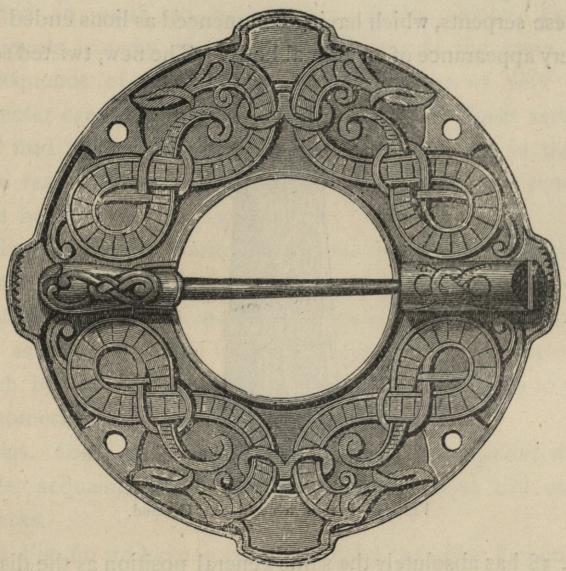


FIG. 58.—Under side of a fibula like Fig. 55. Gotland.

the intertwisted parts of the body, the rim in one place is loosened and wound round the body itself. The original here figured is made of bronze; other specimens have the serpents and the borders plated with silver.

Whence did the Gotlandic workmen get these serpents? The answer cannot be readily given. I can only tell what is my own supposition.

The new figures, grafted upon the earlier series of ornaments at a period when the latter were degenerating, must have been brought in by a strong influence, the source of which need not now be sought. It suffices to acknowledge the influence and to observe the wide difference between the new patterns and the old ones.

But this influence, whencesoever it came, was too strong not to occasion more than the introduction of a new element. It was strong enough to instil a new life into the old decaying ornaments, into these serpents, which having commenced as lions ended by losing every appearance of an animal body. The new, twisted serpent

FIG. 59.—Part of a necklace. Gotland.

of Fig. 58 has absolutely the same general position as the discarded one. Thanks to the new and invigorating influence, the old decaying animal—which seemed with sufficient reason to be almost completely lost—has been transformed into a new state of existence.

The prevailing character of the new epoch is its predilection for massive and vigorous forms. We have seen it in the boar's-head fibula, and in the box-shaped fibula, which have taken the place of the circular one. No stronger instance can perhaps be given of this new style than Fig. 59, which shows the successor of the thin cylinders, Fig. 38.

Both are parts of a necklace; the later one has a decided character, and is very rich in its composition (gilt bronze, silver, sometimes even niello). But still we must recur to our former remark, how very heavy a necklace consisting of such pieces would be to wear.

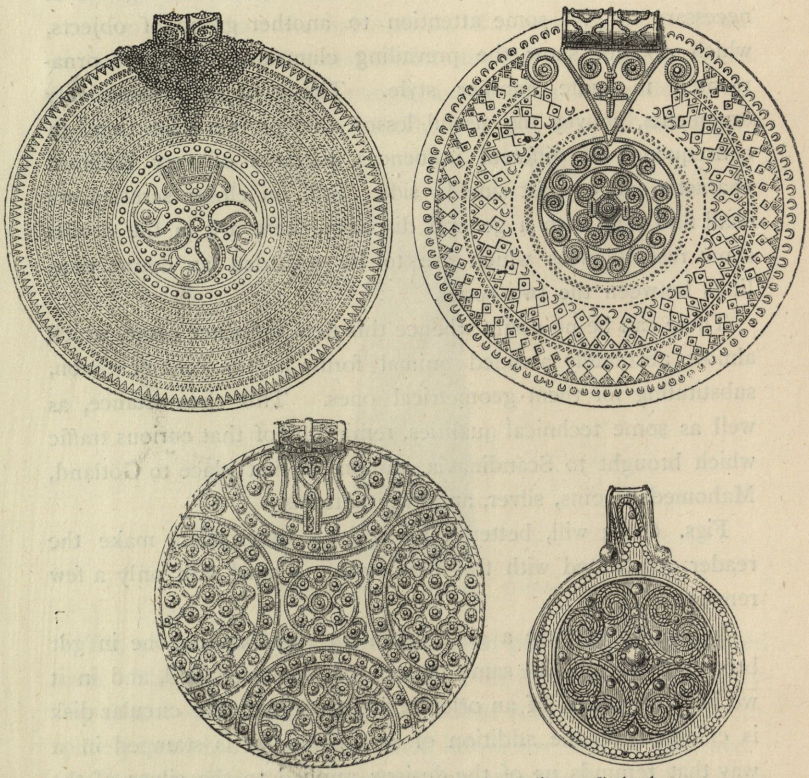
Before leaving this period of the Gotlandic Iron Age, it is necessary to give some attention to another group of objects, which do not show the prevailing clumsiness, and are ornamented in quite another style. These objects, exclusively ornaments, convey the useful lesson that at the same time, in consequence of different influences, patterns of very different character can co-exist side by side. Still, on closer scrutiny, we shall find that, with a general disparity, there are in the details some resemblances which are to be regarded as connecting-links between the two series.

There can be no doubt whence this new influence came, which almost absolutely avoided animal forms in the ornamentation, substituting for them geometrical ones. This circumstance, as well as some technical qualities, remind us of that curious traffic which brought to Scandinavia, and in the first place to Gotland, Mahomedan coins, silver, and even patterns.

Figs. 60-63 will, better than a long description, make the reader acquainted with this new style. I need add only a few remarks.

In Fig. 60 we have a gold ornament very like the one in gilt bronze, Fig. 37. The same pattern has been retained, and in it we have no traces of an oriental influence, but the circular disk is enlarged by the addition of a rim, and it is stamped in a way that reminds us of the designs applied to the silver of the oriental finds. The addition of this rim is an immense advance: the wide surface, with its uniform ornamentation, has got a distinct border, which at the same time, by the force of contrast, sets off the enclosed surface and gives to it an effective boundary.

In Fig. 62, another gold disk, we find a new pattern, in which the geometrical ornament is the principal feature: upon the smooth surface are soldered slender threads of gold, which, by their relief, shed over the shining ground an agreeable and shifting effect of light and shadow. Only in the uppermost part, below the



FIGS. 60-63.—Pendent ornaments of gold and silver. Gotland.

cylindrical loop, we perceive an animal ornament; it has somewhat the appearance of a human bust with lifted arms, but if we make the necessary comparisons it is obvious that we have before us a figure of an animal with lifted fore-paws. Here we have one

of the links which connect this series of objects with those which have already been the subject of our observations. In the four fields of the fibula, Fig. 57, we have another variety of the same animal.

A silver pendant, Fig. 63, gives us an absolutely geometrical pattern of a very graceful kind: this pendant belongs to a treasure, which, to judge from the coins in it, must have been concealed in the beginning of the eleventh century.

In the gold pendant, Fig. 61, we find the different patterns of the three others united; in the central part, that of Fig. 63, surrounded by ∞-like wires, which are also found on the loop of Fig. 60. The loop of the pendant which we now are studying, has, on the contrary, the pattern of Fig. 62, and the larger border displays well-arranged stamped ornaments of the same kind as those of the rim in Fig. 60, only a great deal richer.

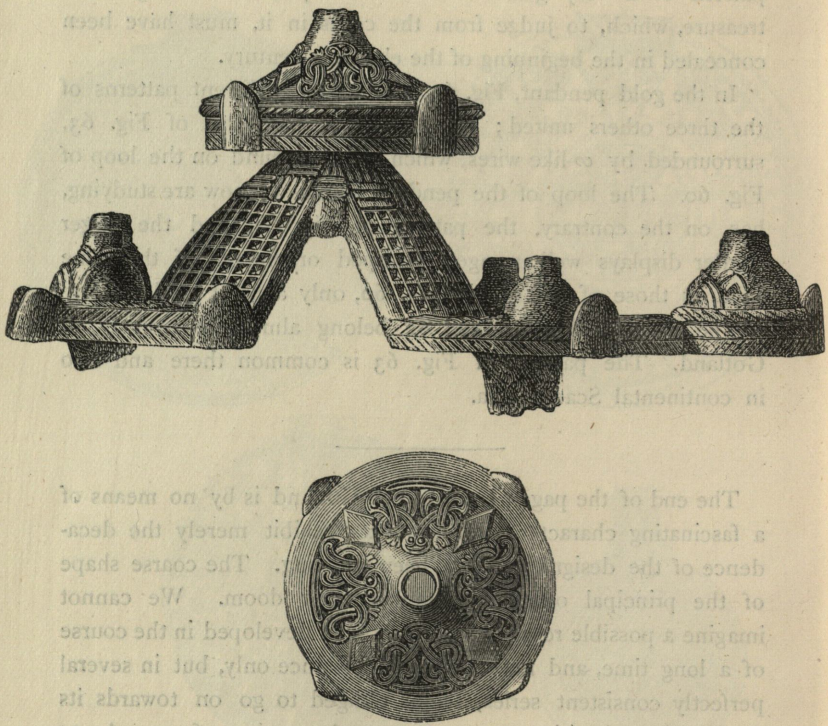
The types of Fig. 60 and 62 belong almost exclusively to Gotland. The pattern of Fig. 63 is common there and also in continental Scandinavia.

The end of the pagan Iron Age of Gotland is by no means of a fascinating character. Its products exhibit merely the decadence of the designs we have been studying. The coarse shape of the principal ornaments implies their doom. We cannot imagine a possible rescue; what has been developed in the course of a long time, and not in a single instance only, but in several perfectly consistent series, seems obliged to go on towards its deplorable end without any prospect of a saving reform. As to the ornaments, we again find the same decaying progress, which at last gives only such meaningless forms, that not even the boldest imagination can discover in them any definite patterns.

I will produce but a few representations of these last signs of decaying art: they give us, it is true, a lesson in the laws of art-development, but they cannot be of any practical use

unless perhaps to serve as warnings against what is to be avoided.

Only to prove that my tale of a general decay is not a gratuitous assumption, I give here two figures showing the dismal decline in its earlier stages.



FIGS. 64, 65.—Bronze fibula. Gotland.

Again we meet (Figs. 64 and 65) the large fibula, characterised by the low arc connecting the two end pieces. It is too large and heavy to be commodious, all variety of pattern on the broad surface is gone, and the ornaments are either simple and monotonous, or reveal a mechanical copying of older patterns of which

the workman no longer cared to retain more than a superficial likeness. Yet on the surface of the top disk (Fig. 65) we still recognise the animal with lifted paws.

FIGS. 66, 67.—Box-shaped fibula. Gotland.

The decadence is revealed to us in a more decided form in the box-shaped fibula (Figs. 66 and 67). Who in the four principal ornaments on the upper surface (Fig. 67) would recognise the well-known pattern of earlier times if he had not the opportunity

of studying it in hundreds of older examples? The side view (Fig. 66) exhibits the same poverty of invention, the same coarseness in workmanship, and the same mechanical copying of given models, without any appreciation of their meaning, and without the justice due from a copyist to his original.

The decadence is considerable, but nevertheless there are to be seen in the Royal Historical Museum of Stockholm specimens which are still worse.

To conclude this chapter and to prepare the transition to the following one, I will recall to the reader some of the ornamental patterns belonging to the later part of the Iron Age of Gotland. Some, very characteristic of the commencement of this epoch, are

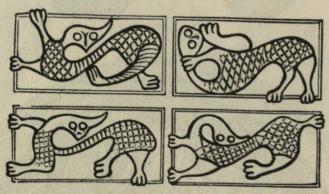


FIG. 68.—Ornament. Gotland.

given in Figs. 53 and 54. To them I will only add Fig. 68, four animals copied from the side posts of a box-shaped fibula. They are treated in a decidedly conventional manner: the head has its curious appendage, the body is as lean as that of an heraldic lion. Still, these figures give us a good idea of a lively quadruped; recalling the soft and playful movements of a romping kitten. In all four there is one common trait to which I wish to call especial attention: every one of them is with one or more of its feet grasping either the border of the field or its own neck.

Belonging to the later epoch, represented by the fibula Fig. 55, I give two patterns from which the top and side ornaments of Figs. 66 and 67 have been developed. In Fig. 69 we see

what may be called the sitting animal with a face almost human under a large wig. In contempt of all organic laws of design it is not possible to advance further. The constituent parts of this pattern are, the head, neck, two legs, the three-toed feet, which are grasping the extremities of the wig, the body itself, and the tail. That a quadruped should be reproduced as a biped by a people not very advanced in art, is a fact of common occurrence, but, fortunately, it is more rare for the sake of symmetry, to sacrifice altogether the real nature of the body. This, however, has been done in this case by giving the animal two necks which start from the head and are joined on directly to the legs, which,

FIG. 69.—Ornament. Gotland.

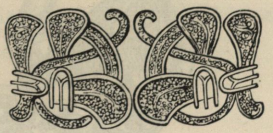


FIG. 70.—Ornament. Gotland.

being tied together at the bottom by two ribbons, may be supposed to represent the body; the tail also is doubled, one tail springing out from each leg.

In Fig. 70 we have a good specimen of what we may call a juggling animal. The body is bent into a complete circle and possesses a regular tail gracefully entering into the general convolution. Both the legs are turned backwards, the fore-paw is grasping the hind-leg, the paw of which is in turn grasping the appendage to the head, which has a considerable resemblance to a very long *chignon*. We see the grasping animal recurring everywhere during this epoch.

Figs. 69 and 70 are of a retrospective interest. But according to my promise, I have also to show something that would prepare

the transition to the subject of the next chapter. Fig. 71 represents a bronze object probably belonging to harness. It is not complete; the appendage that has been attached to a strap, with a view to fasten it to the central ring, cannot have been a single one, the two open parts of the ring indicate that two appendages of the same kind are missing. The ornaments, among which is the grasping animal, are more vigorous than we have seen them in the preceding specimens, and in this respect they have a greater resemblance to the products of the continental art of Scandinavia.

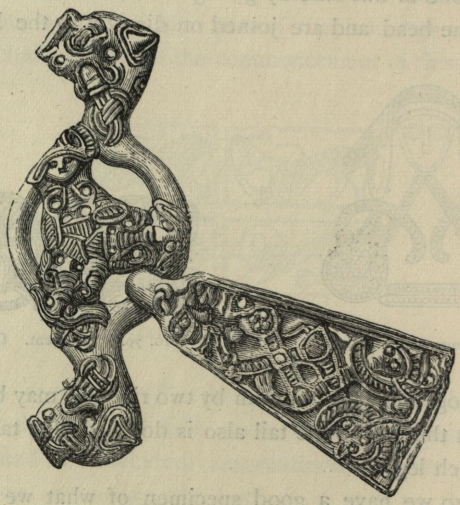


FIG. 71.—Part of harness. Gotland.

I presume that this strap-holder, although not very characteristic of the taste prevailing in Gotland, was made in the island, as it was found there. The rich collection of the Museum of Stockholm possesses specimens of strap-holders nearly related to Gotlandic art, which generally, in its happier efforts, has something delicate in its productions. One of these specimens is here given (Fig. 72), and consists of a simple ring and three strap-holders which are in the shape of an elaborately and fantastically formed

animal's head, with its mouth closed over the ring. The body, as I have said before, was not wanting, and was here represented by

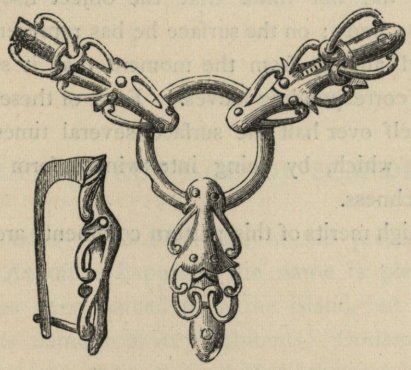


FIG. 72.—Part of a harness. Gotland.

the strap, which in this capacity is quite as serviceable as the bodies on the ornaments of the time in question.

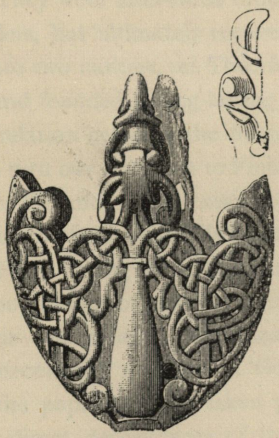


FIG. 73.—End of a scabbard. Gotland.

The head in this case, although a little more elaborated, is the same as that seen in profile in Fig. 56. We observe the same

kind of head in the protruding middle point of Fig. 73—the lower end of a sword scabbard, made of bronze. In this case the workman did not think that the object itself sufficiently represented the body; on the surface he has represented, in relief, a body divided already from the moment that it starts from the head into two corresponding halves. Each of these halves gracefully winds itself over half the surface, several times sending out new branches, which, by being intertwined, form a pattern of harmonious richness.

Upon the high merits of this pattern comments are not needed.

THE LATER IRON AGE OF SCANDINAVIA.

THE inhabitants of Gotland are at the present day called Gotlanders. As often happens, the name is pleonastic. The population has been named from the island, but originally the island took its name from its inhabitants. Gotland is the land of the *Gutar*, as they have called themselves from time immemorial, or Goths as it is written in English. They have exactly the same ethnic name as the powerful Gothic tribes who had established, at a very early epoch, an important kingdom in Southern Russia. They were afterwards brought under the yoke of the Hunnic invaders, but ultimately recovered their independence, and, divided into two nations, set Theodoric the Great upon the throne of Italy, and founded a long-lasting dynasty in Spain.

We find the same relation between the name of the inhabitants and of the land if we turn our attention to Finland—Fins, Finland, Finlanders. But in Finland there exists some reason for the double ethnical name; the land, originally belonging to and named from the Tchudic Fins, having at a later time, from the twelfth century, also had a population of another kind, viz., the Swedish immigrants and their descendants. Consequently an inhabitant of Finland is not necessarily a Fin. In Gotland, on the contrary, no change of the population has taken place. The present Gotlanders are the direct descendants of the Goths, who gave their name to the island. They speak a dialect of the Swedish language not easily understood by any one not accustomed to it. The isolated situation of the island has kept up a strong spirit of

independence in the minds of the Gotlanders. When, for instance, they are going to Stockholm, they will tell you they are travelling to Sweden, a manner of viewing the relation between the two districts, which is curious enough, and which, in a certain way, corresponds to the archæological facts.

The earliest records of history mention a great number of tribes in Scandinavia. In Sweden we have to distinguish at first three ethnical groups; commencing in the south, and going northwards, the *Gautar*, in the modern language *Götar*—which ought to be well distinguished from the *Gutar* and Goths—the *Svear*, or Swedes, and the *Helsingar*, inhabiting Northern Sweden up to lat. 64° 30′. The Götar were divided into several sub-tribes, *Götar* proper, *Virdar*, *Vermer*, &c.

The present kingdom of Sweden has a greater extent than the Sweden of the first historical time. The large and fertile province of Skåne belonged then to Denmark, constituting one of its most important parts, as did also Halland. The northern part of the western coast of Sweden belonged to the Norwegian province of Viken. Sweden possessed a small strip of coast between Viken and Halland, where, in modern times, the city of Gothenburg has been founded. In the northern part of Sweden the province of Jämtland belonged to Norway. The Swedes, occupying the central part of Eastern Sweden, had a preponderance over the other tribes. For that reason the old political terminology makes a difference between *Svithjod*, the people and the land of the Swedes proper, and *Sveavälde*, or the kingdom of Sweden.

The nature of Norway has given to its ethnographical constitution another aspect. Mighty mountain-ridges divided the land into several districts, each of which acquired great independence, as it was very difficult to pass its borders. Several tribal names in Norway occur, of various importance; some, as, for instance, *Egdir*, *Hördar*, belong to smaller tribes, while the name of *Thröndir* belongs to the powerful tribe inhabiting the extensive tract on the northern side of the mountain ridge of Dovre.

In Norway, as in Sweden, the northern part was inhabited by the Finnic nation, but antiquities, no doubt belonging to the Scandinavian Norwegians, are found even in the most northern parts of the country.

The earliest description of Sweden and Norway is to be found in the Anglo-Saxon translation of the geographical work of the Roman Orosius, made by King Alfred. His court was visited by two Norwegians, Ottar and Ulfsten, who had undertaken extensive voyages in Scandinavia, as well in the Atlantic as in the Baltic Sea. The information the king gathered from them he introduced into his translation, and the work is of the highest importance for the knowledge of the first historical period of Scandinavia. In the time of King Alfred all Norway was subject to one king. The important revolution that put an end to the independence of the many separate kingdoms had been made by a contemporary of King Alfred, the energetic King Harald. The formation of the kingdom of Sweden is of an earlier date, and belongs to a legendary period, from which we have names and facts only, but no dates.

But if Sweden was older as a kingdom, Norway entered earlier upon the stage of real history. It is the exploits of the northern vikings, in which the Norwegians took a prominent part, that filled the chronicles of the western nations with notices of Scandinavia. This circumstance is of very great interest, but the importance of these exploits is still greater. They were the product of an exuberant vitality, and fostered in the minds of a people capable of such impulses, a sense of its own importance, and a desire to propagate to coming ages the memory of the feats of its own day. From the bloody excursions of the vikings originates the historical period of Scandinavia. For reasons which it is here unnecessary for me to explain, the writing of Scandinavian history was from the first the work of the Icelanders, and as they, with few exceptions, had gone, directly or indirectly, from Norway, its history was written earlier than that of Sweden.

The geographical position of a country must of course exercise a considerable influence upon its relations to the exterior world. As I have already shown, Sweden possessed only a very restricted coast on the western sea, but on the east, the coast, on the contrary, was extensive. Thus it was quite natural to the Swedish people to direct its attention to the east, to cross the Baltic, to enter into commercial connections with the nations of the opposite shores, and to seek on them and in the countries to which they gave access, a field for its bravery and an opportunity of founding an organised state. Professor Vilhelm Thomsen, of Copenhagen, has already proved[1] that, notwithstanding the objections made to it by an ultra-patriotic party in Russia, that vast empire had its origin from a Swedish colony established there in the ninth century.

It is not as yet possible to give a definite date for the commencement of the later Iron Age of continental Scandinavia. Dates have been assigned, but to discuss them here would lead me too far away from my subject. The exact time of the important revolution, which was the origin of the latest phase of pagan civilisation in Scandinavia, is to us completely indifferent, as it belongs to an epoch earlier than the first appearance of the Norsemen in Britain, and to the somewhat later establishment of the Swedish empire in Russia. From the evidence of the antiquities I will presently show that the difference between the earlier and the later periods of the Scandinavian Iron Age is very considerable. The philological researches of Scandinavian scholars have confirmed in the most satisfactory way the conclusions arrived at by archæologists. Between the languages spoken during the two periods in question, there exists an indisputable kindred, though Professor Bugge of Christiania, when attributing the origin of the greatest part of the Eddic lays to the period of the vikings, seeks for an argument to the contrary in the

[1] *The Relation between Ancient Russia and Scandinavia and the Origin of the Russian State.* Oxford, 1877.

impossibility of reconciling the demands of the poetical laws of Scandinavian literature with the resources of the language spoken in the earlier Iron Age.

When speaking of this earlier Iron Age I have alluded to the intercourse with Southern Europe and to the influence exercised by its civilisation on that of Scandinavia. Before entering upon an exposition of the character of the later Iron Age, some notices of the relations of that period to the exterior world are necessary.

To a Swede it is quite natural to direct his attention in the first place towards the East.

The Mahomedan states of Asia have shown a great activity in minting, and their coins are of the highest interest, as they give not only the name of the prince who caused them to be struck, but also the name of the city where the mint existed, and the year in which the coin was made. Considerable stores of such coins, most of them of the Samanid dynasty, have been found in Sweden. It is satisfactorily proved by Russian finds, that these coins were brought from the states near the Caspian Sea through Russia to the shores of the Baltic Sea, and thence, thanks to the commerce established by the inhabitants of Gotland, over to that island. From Gotland, and, probably, also by direct intercourse with Russia, the Mahomedan coins were spread over Scandinavia, being of course more common in the eastern provinces of Sweden than in the western and in Norway. More than fifteen years ago I counted the coins of this class found in Sweden, as far as our knowledge of such finds goes, and I reached the considerable number of almost 20,000 pieces. As every year brings to the Royal Collection of Stockholm new finds, this number is now exceeded. According to Professor Tornberg, who examined all the Mahomedan coins found before his death, the greatest part of these coins came to Sweden between the years 880 and 955. Single coins of course arrived earlier, and later stragglers are not rare. The latest coin of this kind that has been found in Sweden belongs to A.D. 1010.

In the finds the Mahomedan coins are generally associated with ingots, rings, and ornaments of silver. Silver mines occur in Sweden, but they cannot have exercised any influence in the pagan time, as mining was then unknown. Silver ornaments have been found in the tombs of the earlier Iron Age of Scandinavia, and the material required for them must have been brought from the south. In the later period silver was more abundant, and must have come from the east. Russia, although very rich in silver mines, as late as in the sixteenth century obtained its silver from Asia.

It has been the custom in Sweden to regard the silver ornaments accompanying the Mahomedan coins, as well as those of the following age, as works of Eastern silversmiths. I shall have occasion to treat of this subject a little later on, but it is desirable to state here that the intercourse with the Mahomedans, through the medium of the inhabitants of Russia, brought the material, as well as some patterns, to Sweden, but that the greater number of silver ornaments found in Sweden seem to be the product of an indigenous workmanship.[1]

The importance of this commerce with the East is shown by the great number of Mahomedan coins found in Gotland as well as in other parts of Sweden. Of its importance and of its results we shall have a clearer idea if we remember that when large quantities of Anglo-Saxon and German coins came to Sweden at a somewhat later period, most of them are not found in Western Sweden, where, from its geographical position, the principal proofs of a frequent intercourse with England might be supposed to be found, but in the eastern provinces, especially in Gotland. At the time of the intercourse with the East this island had apparently become a commercial centre of the North, on account of its good geographical situation; and when, later, the coins of Western Europe were brought to Scandinavia as a part of the

[1] The correspondence between some silver ornaments used in India and others found in Sweden depends on a common influence originating from the Mahomedans.

Danegeld paid by England to its hostile visitors, or in other ways, they went, by force of the existing circumstances, principally to Gotland, and were thence dispersed over *Eastern* Sweden. Of course the finds of Anglo-Saxon coins in Skâne, then belonging to Denmark, and finds of the same kind in Norway, may be explained by a direct intercourse with England.

At present I am occupied with the determination and arrangement of the German coins found in Sweden, but my work is not advanced far enough to enable me to communicate here any numbers. The Anglo-Saxon coins have been determined by my father and predecessor in my official position, who printed a first edition of his catalogue of Anglo-Saxon coins in the Royal Cabinet of Stockholm in 1846, and a second edition in 1881. To give an idea of the numbers of the Anglo-Saxon coins found in Sweden and preserved in the Royal Collection, the following list of the numbers of types, and of varieties of types, existing there in the years 1846 and 1881 respectively will be sufficient:—

	In 1846.	In 1881.
Edward I.	—	4
Ethelstan	—	1
Sihtric of Northumberland	—	1
Coin with the name of St. Peter	—	1
Edgar	30	60
Edward II.	11	27
Ethelred II.	2,254	4,389
Canute	1,396	3,904
Harold I.	237	1,050
Harthacnut	31	216
Edward Confessor	273	800
Harold II.	—	5
	4,232	10,458

To this number must be added 120 coins of King Sihtric of Dublin (A.D. 989—1020).

But to get a correct idea of the extent to which Anglo-Saxon coins of this epoch are found in Sweden, and of the importance of Gotland as a commercial centre of the North, it is not sufficient to give the number of types and their varieties, the coins themselves must be counted over, and then we get instead of 10,578 more than 20,000.

The name of William the Conqueror is to be seen on the latest of these coins. The circumstances which brought all these English coins to Gotland and Sweden lasted, therefore, until the latter half of the eleventh century.

If the presence of Anglo-Saxon coins in the Swedish finds cannot, for reasons already given, be regarded as proofs of a direct intercourse following the shortest way between England and Sweden, there are evidences enough of the existence of direct relations between England and the Scandinavian countries,—evidences historical, as well as archæological and numismatic. Had the latter been missing, we should have been justified in thinking it very curious. Two Danish kings, Sven and his son Canute the Great, reigned in England; Danes and Norsemen, and sometimes, also, Swedes, visited England, lived in England, and became acquainted with English manners and English art. While living in the West they kept up an intercourse with their original homes, and in several cases returned to them after a longer or shorter sojourn in Britain or Ireland.

The first Christian king of Sweden, Olof, the stepson of Sven, king of Denmark and England, was also the first who coined Swedish money. This was not only fashioned after the patterns of the English pennies of the epoch, but the coinage was executed in the Swedish city of Sigtuna—now not much more than a village, then a favourite residence of the court—by English mintmasters, who seem to have come principally from Lincoln and its neighbourhood. In the same way the English monetary system was introduced into Norway about the same time.

But the direct relations go back to an earlier time, to the epoch of the vikings, and we have evidence of this in certain antiquities found in Scandinavia, unmistakably products of Anglo-Saxon and Irish art. As historical records would lead us to expect, such objects are more common in Norway than in Sweden. They may be divided into two classes: ornaments used in Scandinavia in the same way as originally used in the country of their origin, and objects, principally ecclesiastical, belonging to the churches and monasteries plundered by the Northmen, and in the hands of their new possessors either serving other purposes or regarded as valuable curiosities. In the Museum of Northern Antiquities at Copenhagen, enriched by many Norwegian antiquities while Norway was a Danish province, is to be seen a reliquary, mentioned in the oldest inventories as having been brought from Norway. The ornamentation is decidedly Celtic in its character; on the bottom a runic inscription is engraved, stating that a woman of the name of Ranvaik had possessed this casket. In the same museum is also preserved the highly ornamented and richly gilt cylindrical mounting of a spearstaff, or, as I think, much more probably, of a crozier, as well as an ornament here copied in Fig. 74. It is of bronze gilt, and the character of its ornamentation is perfectly clear. Among the many specimens of Celtic workmanship preserved in the archæological museum at Christiania, I will only mention a bronze brooch, belonging to the group of annular brooches, which has been treated of very fully by Mr. Joseph Anderson in his interesting work, *Scotland in Early Christian Times* (2nd series, chap. i.).

Thus we have to note a direct intercourse with Britain and Ireland, carried on during a long period, bringing, and especially to Norway, works of Western art, and extending its influence over both the Scandinavian kingdoms. The treasures containing English and German coins are generally very rich in ornaments, &c., of silver, but in the latter I cannot find any traces

of Western influence. This fact may certainly be explained by the mode in which English coins were dispersed over Sweden; as this was not direct, it would be unreasonable to look for a direct influence exercised by English art. On the contrary, the good style of the ornaments accompanying the coins of Western Europe, and the tastefulness and high technical qualities displayed in them, are to be attributed to the pre-eminent skill of the Scandinavian silversmiths. In several cases

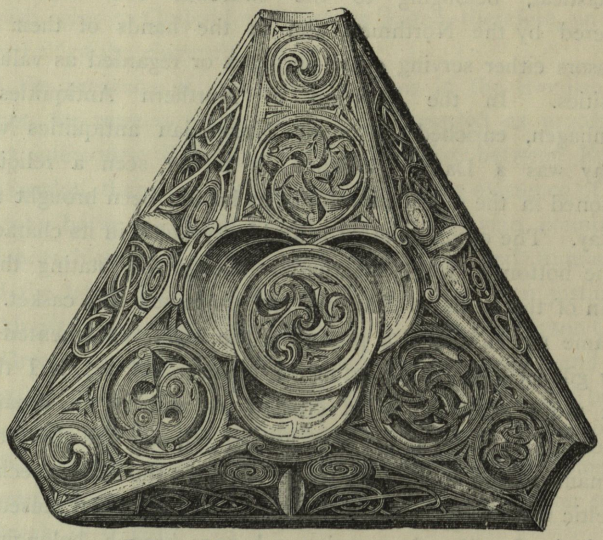


FIG. 74.—Celtic ornament found in Norway.

the technical processes and the patterns are to be traced back to the earlier epoch when Eastern Scandinavia especially was open to Oriental patterns and Oriental influence, which evidently have exercised considerable power.

Nevertheless, if we take a preparatory view of the mass of objects attributed to the later Iron Age of Scandinavia, we shall find much that is by no means of an Oriental character, but which really represents a true early Scandinavian art, as is

shown by the correspondence of the principal types and the endless number of variations in which each type reveals itself. Native Scandinavian art must therefore be the principal object of the following remarks.

I will now attempt to show that there exists between the objects of the earlier and the later Iron Ages of continental Scandinavia a considerable difference. And here it will very naturally be asked whence the new forces came which gave to the later age its constituent qualities. I will not however undertake to answer this question here, as I am not at this moment writing an archæological treatise. It is not the early civilisation of Scandinavia in its totality, but the industrial arts only, which are now to be the object of our attention. These are of course most intimately connected with the general state of Scandinavian civilisation, but of its history, as far as it can be stated, I will not give more than is absolutely necessary for the correct estimation of the art.

I should mention *first*, that the sharp distinction between the two Scandinavian Iron Ages—to my eyes exceedingly clear—is advocated at this moment principally by Professor Rygh of Christiania and myself, while other antiquaries of the North manifest more or less pronounced tendencies to look for and to find connecting links between the two periods and their respective arts. I will, as far as possible, endeavour to enable the reader to form for himself an opinion of the theories under debate in the North. It should further be stated that the origin of what is characteristic of the later Iron Age has been explained in different ways, but as a discussion of the principal opinions would lead me too far away from my purpose, this part of the subject will be entirely omitted. I am justified in doing so, because whatever the origin was and whencesoever the influences came, which brought into existence the principal characteristics of this later age, so much original work of assimilation, adaptation, and development appears everywhere, that we are forced to recognise exactly this work as determining the character of the period, and as giving

to all its productions a clearly defined impression of their own. Although it would be of the highest interest to trace back to their original sources all the influences that have contributed to the formation of Scandinavian art, yet, inasmuch as in attempting such an exposition we should in every case be tempted to enter into numerous controversies, it is necessary to keep steadily in mind that our present interest in this matter is eminently practical, viz. to know what Scandinavian art really was in the pagan time in the North.

To obtain a correct appreciation of the facts, it is necessary to remind the reader of some of the principal points to which I have called attention concerning art-development during the Iron Age of Gotland.

We have striven to prove, not only by words, but, which is more convincing, by a great number of figures, impartially selected, that some of the most characteristic types of the earlier Iron Age in this island survived the end of that period, never giving up their place to new types, and continuing to develop themselves, independently of the previous evolution. The slender bow-shaped fibula was transformed into what in the North is called the boar's head form. The larger variety, with its two extensive end-pieces connected by the bow, increased gradually in size, and after a time became very coarse; this not very commendable quality became, as we have seen, at last still more exaggerated. The fibula, originally consisting of a thin circular disc to which the pin was attached, acquired the shape of a circular box. In this form it was continued until the period when Christian influences abolished the custom of interring the dead clothed in their garments and with their ornaments of daily use. It may, therefore, be said that the revolution in prevailing customs has deprived us of the means of judging what shape an ulterior development would have taken. Yet in this instance we can bear with equanimity the disappointment natural in such circumstances, for we are perfectly justified in asking in

what way an ulterior development could be attained if the fibulæ were to be still more enlarged. This indeed was not possible, if they were still meant to be used as safety-pins. Judging from further experience in the decaying patterns of ornament a new life certainly could have been infused; but this process, as we also know from our previous experience, must have been provoked by a new and very powerful influence, which would have carried us over into quite a new phase of art. We have now come, quite independently of all foreign influences, to the close of this evolution, which went on through centuries, and in its course suffered the doom, inseparable from human life, that decay never fails to follow the period when the bud has developed itself into the flower with all its resplendent beauty.

I frankly avow a certain predilection for the fibulæ of the earlier periods of human civilisation. Perhaps an explanation of this feeling is necessary; it is easily given, and in a manner, I hope, convincing to others. In almost every implement there are two elements, one of imperious necessity, determined by its intended use, another of a less definite character, its ornamentation, depending on the fancy of the workman, or rather on the fancy of the people to which the workman belongs, and to the demands of which he must be an obedient servant. In the whole dominion of industrial art, certainly in metal work, there is scarcely an object which gives us so favourable an opportunity of studying the originality of a people as the fibula. Its important part, the pin, is so simple that it can never be subjected to any development. But even in early times the necessity was felt of obtaining a better assurance against the slipping out of the pin than that given by its head, and as soon as this necessity became evident, as soon as the want of a safety-pin was perceived, the door was opened in the widest way to the ingenuity of every people and its workmen, who were necessarily dependent on the demands of the nation and the age. It is of no avail to refer to the modern safety-pins, so simple in their construction, and in this respect,

as is easily proved, representing the earliest state of this useful implement. Every one conversant with the customs of earlier ages, prehistoric as well as mediæval, knows perfectly well that to pins, brooches, or clasps, previous generations directed a greater attention than modern ones have done. What we are anxious to conceal they used as objects of luxury, and those objects, of which the present age acknowledges the utility, and nothing more, they endowed with the highest nobility of industrial art.

I need not prove this assertion; I have only to refer the reader to the figures given in the preceding pages, figures in which the accessory elements, depending on the ethnical proclivities, take a prominent place, and to the experience of every archæologist, whether he occupies himself with prehistoric studies or with the study of the middle ages.

Having thus justified my theory, I ask the reader to direct his attention to the fibulæ of the later Iron Age of continental Scandinavia. Hitherto I have spoken principally of the industrial art of the Gotlanders. As their island is not very distant from continental Sweden, as its inhabitants at the present day, without any new immigration, must be regarded as Swedes—I use here this expression in its widest sense—and as in the later Iron Age a frequent intercourse must have existed between their island and the continent of Sweden, it is necessary to mention, as being somewhat singular, that the Gotlandic fibulæ, as well as other Gotlandic types, are exceedingly rare in continental Sweden, and that correspondingly the characteristic types of the mainland are very seldom found in Gotlandic tombs.

The fibula characteristic of continental Scandinavia, Norway as well as Sweden, is oval-shaped, vaulted and very large, in that respect resembling those of the later Iron Age of Gotland. I give here four figures (75—78), all representing originals found in Sweden, and preserved in the Royal Historical Museum of Stockholm. The two first are not very common,

but enter as very important constituents into the series of development; the two others are as common in Norway as in Sweden. I have made use only of the originals nearest to hand.

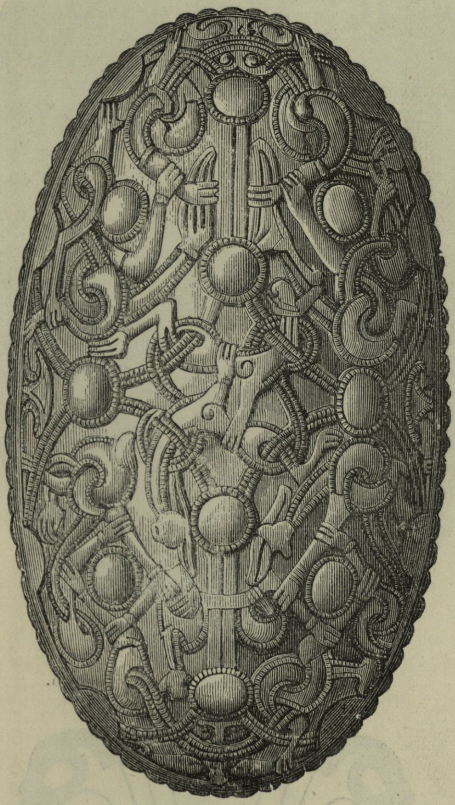


FIG. 75.—Oval brooch for women. Sweden.

This fibula is in an eminent sense Scandinavian. In the finds of Sweden and Norway it is represented in very great numbers. In the year 1873 more than four hundred were known as found in Sweden, and about the same number as found in Norway. Since that time the numbers have increased.

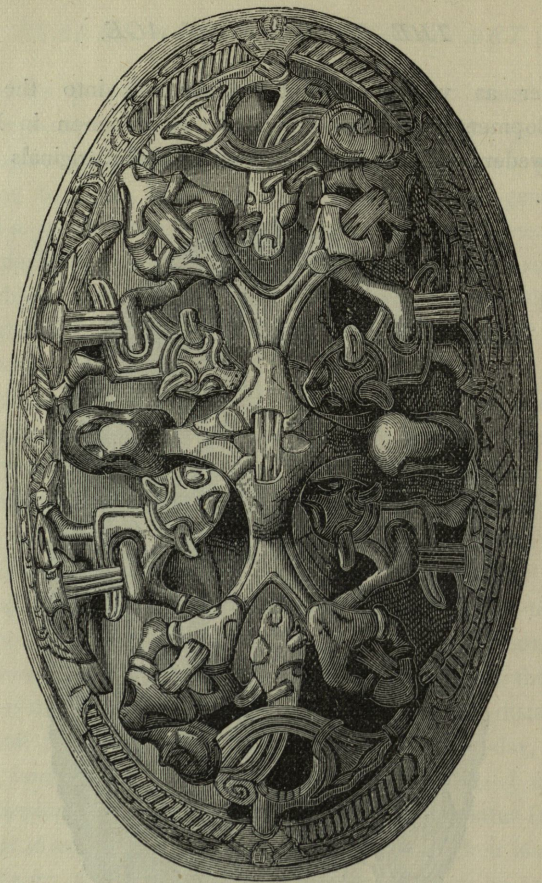


FIG. 76.—Oval brooch for women. Sweden.

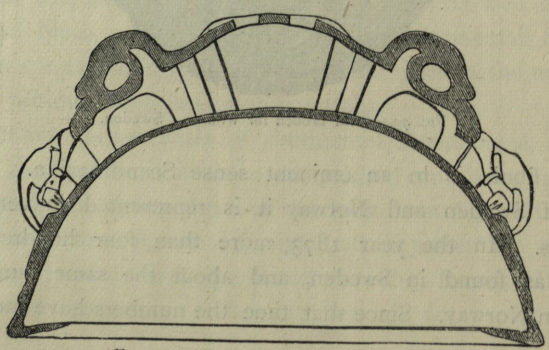


FIG. 76A.—Transverse section of Fig. 76.

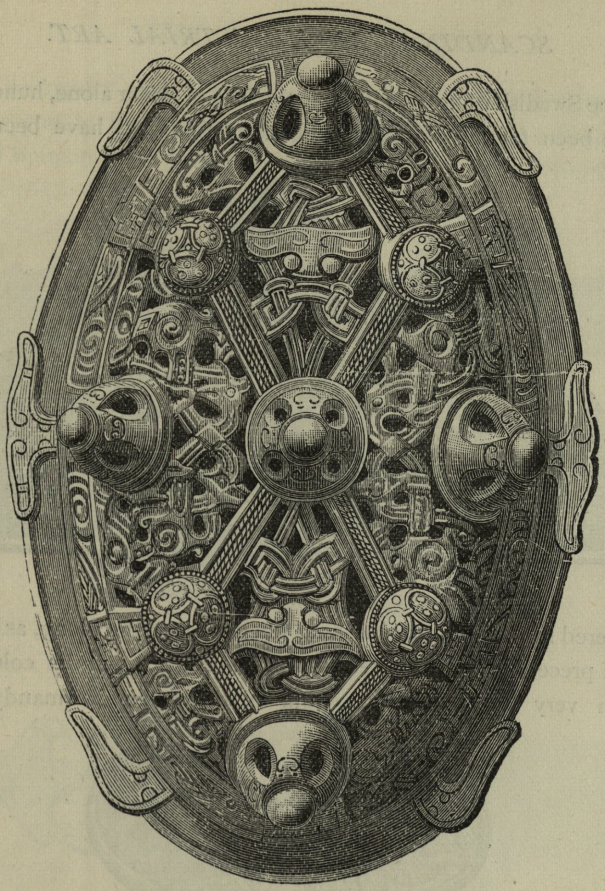


FIG. 77.—Oval brooch for women. Sweden.

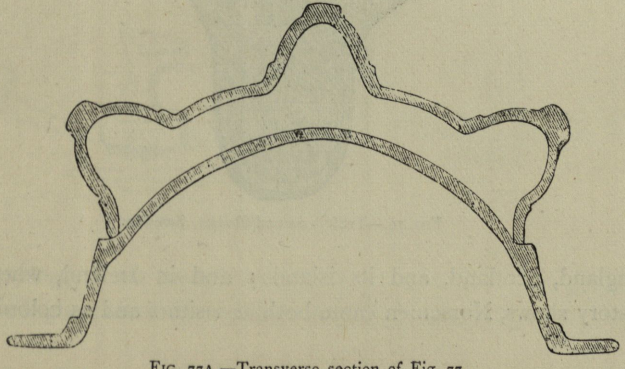


FIG. 77A.—Transverse section of Fig. 77.

In the Swedish island of Björkö in the lake of Mälar alone, hundreds have been found. Moreover, fibulæ of this kind have been dis-

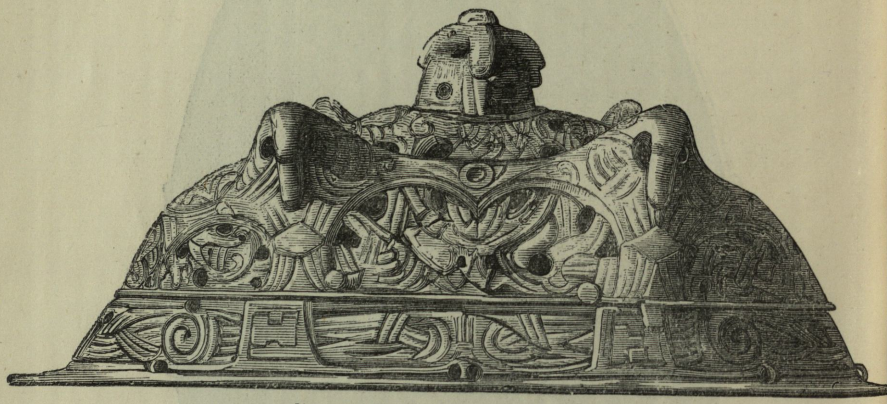


FIG. 78.—Oval buckle for women. Sweden.

covered in the interior of Russia, where a Swedish colony, as stated in a preceding page, existed; in Iceland, which got its colonists, with very few exceptions, from Norway; in Normandy; in

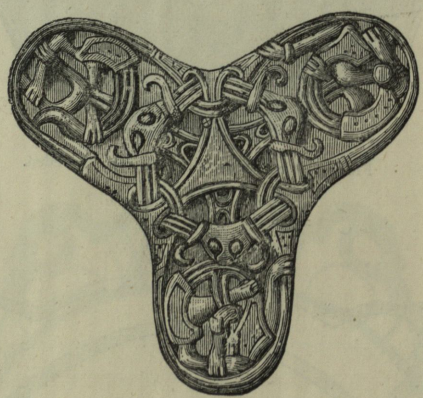


FIG. 79.—Trefoil-shaped fibula. Sweden.

England, Scotland, and its islands; and in Ireland, where, as history shows, Norsemen came both as visitors and as colonists.

The reader will, I suppose, not find any correspondence to this type in the figures previously given. Not to impose my own opinion on a public not very conversant with Scandinavian

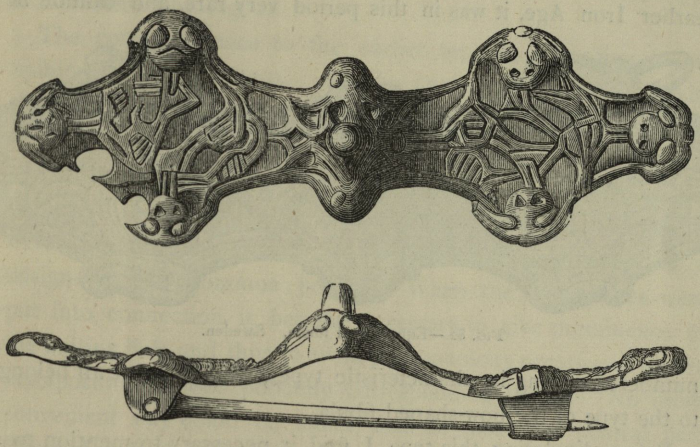


FIG. 80.—Equal-lobed fibula. Sweden.

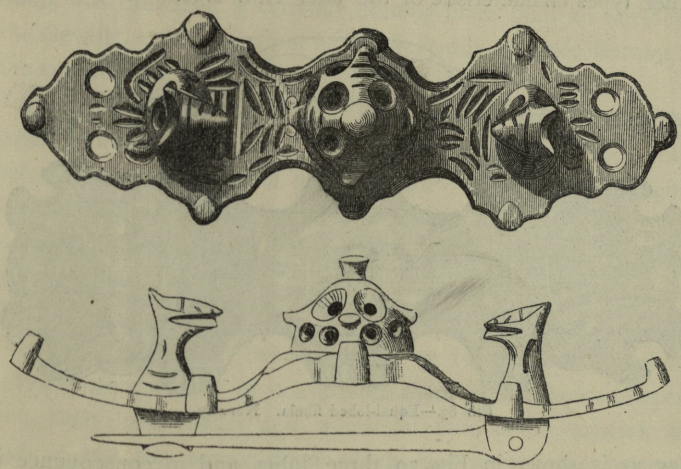


FIG. 81.—Equal-lobed fibula. Sweden.

archæology, I am forced to say that Scandinavian archæologists of the highest merit have endeavoured to establish that this type is

developed from a small oval-shaped fibula belonging to the earlier Iron Age, and in this way to lessen the difference between the two ages. But if the pretended original really belongs to the earlier Iron Age, it was in this period very rare, and cannot be

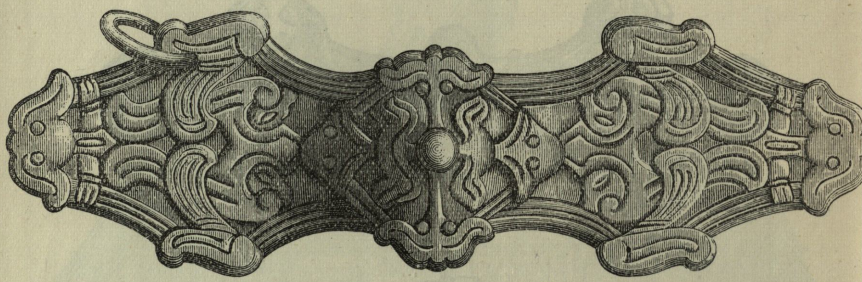


FIG. 82.—Equal-lobed fibula. Sweden.

numbered among its characteristic types, which almost all belong to the type of the bow-shaped fibula.

Before discussing this type I find it necessary to mention two other types characteristic of the later Iron Age. One of them

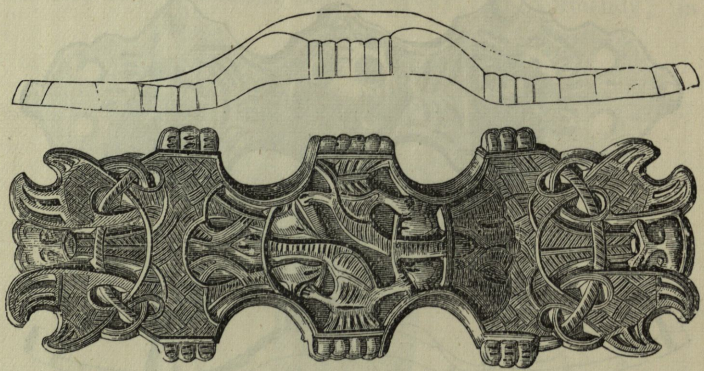


FIG. 83.—Equal-lobed fibula. Norway.

has, as is shown in Fig. 79, three lobes, and in consequence is called in the North the trefoil fibula. The other, here represented by Figs. 80—83, consists of two very elongated lobes, corresponding as to shape and ornaments, and united by a more

elevated central part. For the former one a connection has never been proposed with any type of the previous age. Of the other the origin has been sought in an earlier fibula of which the type is represented by Fig. 26.

The correspondence to the earlier type is, according to my opinion, quite fortuitous. In the ancient bow-shaped fibula, the bow was, next to the pin, the principal object, the two terminating appendages gradually assuming a greater importance, and at last, figuratively speaking, putting the bow into the shade. Here, on the contrary, the two lobes, as I will hereafter show, were the primary objects, originating in a duplication of a design—a very common process. When the two pieces were put into connection, it became necessary to give prominence to the uniting link, and thus to avoid the monotony occasioned by the juxtaposition of two perfectly corresponding pieces. No more convenient way could be found than to make the central part elevated. If, by this arrangement, a likeness to the old bow-fibula was caused, it is certainly nothing more than an accident, the elevated central part not having generally the same features as the earlier bow.

I give here four specimens: Figs. 80 and 81 represent two types common in Sweden; they are very simple and apparently belong to a later state of development. Richer, and belonging to a better period, are Figs. 82 and 83, two fibulæ, of which one is found in Sweden, the other in Norway, where this type is not so common as in Sweden. The linear patterns are much rarer than in the earlier Iron Age, and generally they take the shape, not of lines, but of bands, plaited or twisted. The animal patterns prevail, and in considering them in their wide dispersion, their long vitality and wonderful number of varieties, we find at last the source from which are derived the patterns introduced into Gotlandic art, as shown in Figs. 52—54, &c. There, the new patterns were used exclusively for the adornment of objects which were substantially later developments of

earlier indigenous types. They were there only an appendage, powerless to create a revolution. On the Scandinavian continent they were, on the contrary, of such importance that they were able to call into life quite new types. In this difference of development I see the proof of a greater revolution effected on the Scandinavian continent than that which took place in Gotland, where only a secondary influence was felt.

The principal feature of the ornamentation of the later Iron Age of continental Sweden is an animal grasping either some part of its own body, or something in its vicinity. We have seen this pattern on the later productions of the Gotlandic Iron Age, when it was frequently used to cover larger or smaller

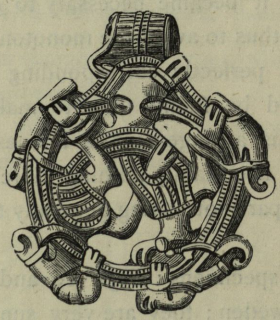
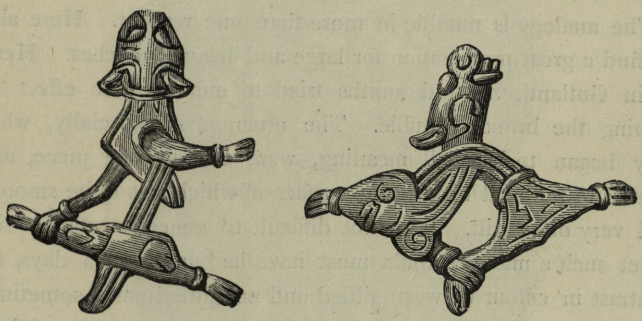


FIG. 84.—Pendent silver ornament. Sweden.

surfaces. But, if the principal feature is the same, there is still a great difference between the Gotlandic and the continental varieties. The latter is more marked in its features, and was able, as I have already mentioned, to create new objects, especially personal ornaments of hitherto unknown construction. We learn this from Fig. 84, where the quadruped is contorted within a circular space, enclosed by a rim, into the composition of which several animals' heads enter. This type, apparently very common in Scandinavia, cannot be regarded as one of the earliest within the period of the later Iron Age. The heads on the rim must have had a previous stage, when they were endowed

with bodies, and when their mutual relations were defined in a clearer manner. The protruding part, forming the continuation of the head of the principal and central animal, covers the loop; the whole serves as a pendant for personal adornment.

Experience shows that in a case such as this two results are possible; either the pattern retains its original character, forming in its different contortions openings, which are very effective, as they permit the colour of the garment to appear through the interstices of gilt metal; or those openings are filled in, and, then, the pattern rests on a smooth ground, to which of course a rim was added to form the boundary demanded by good taste. Afterwards,



FIGS. 85, 86.—Animal ornamental patterns.

by multiplying the pattern, several new combinations and types were created. To obtain an idea of the development which is possible with the material contained in this ornamental pattern alone, let us now turn back to the trefoil fibula, Fig. 79, consisting only, in fact, of three animals of this kind united by the heads in a common centre. There is a smooth metal background, limited in quite a correct way, and, to deprive the three widely-projecting lobes of all apparent tendency towards separation, the slightly elevated rim and the centre have been put in connection.

Wherever we look, we observe the same fantastic animal. It is crawling over the vaulted surface of the oval brooch,

Fig. 76, the animals on which, separately copied in Figs. 85 and 86, are riveted on to the smooth and monotonous surface of the brooch. In graceful windings the same animals spread themselves over the surface of the oval brooch, Fig. 75; in this case they belong entirely to the brooch, as they make parts of its original design. In the oval brooch, Fig. 77, we again meet with these animals, pairs of which are in the two side spaces, although now the pattern commences to dissolve. In Fig. 78, we see the lamentable end of the whole process; a perplexing mass of lines, straight and curved, going in every direction. The result is the same as we have already observed in Gotland.

The analogy is notable in more than one respect. Here also we find a great predilection for large and heavy brooches. Here, as in Gotland, the old smiths tried to enhance the effect by making the brooch double. The ornaments, especially, when they began to lose all meaning, were cast in one piece, and riveted to the oval brooch, the surface of which was quite smooth, and very often gilt. It is not difficult to conceive what a rich effect such a massive fibula must have had in its own days, the contrast in colour between gilded and not gilded parts, sometimes the addition of wires of silver, &c., and then the play of light and shadow produced by the modellings on the ornamental cover, with its protuberances and its irregular gaps, through which the bright inner surface was seen.

To convey a still stronger impression of the importance of the animal pattern here mentioned, and to give the reader, after being forced to behold the painful sight of widely advanced decay, the pleasure of studying a better style, I add Fig. 87, a quadrangular brooch of silver, divided into four parts, each of which is occupied by a specimen of the grasping quadruped. This brooch, found in Skåne, is of the highest interest, partly in consequence of the good taste it reveals, and partly from the technical skill of the workman. It has been cast, but

every feature is clearly and sharply defined; the silver has been partly gilt, partly inlaid with niello. The centre is occupied by a stone of a pale colour.

The oval brooches were, as a rule, worn in pairs, and only by women; they were placed on the upper part of the breast, and each attached to the cloak or mantle. The two brooches were united by a string or a metal chain, sometimes by several, one of which, the shortest, formed the really effective link of union, while the others, of various lengths, hung down over the breast. When looking on these chains in the cases of museums, we

FIG. 87.—Quadrangular brooch, silver. Sweden.

must restore in our mental vision their original brilliancy, now tarnished by the moisture of the soil to which they have so long been exposed.

The ancient Scandinavians had a great liking for chains as ornaments. Circular brooches, especially, had an appendage of chains, hanging from a ring attached to the back of the inner border, each chain ending in a pendant. When the wearer was in movement the chains were dangling and rattling. The inconvenience of entanglement was avoided in a very ingenious way;

on the ring, from which the chains were hung, and between them, beads were placed to keep them apart.

The trefoil-shaped fibula, as well as the others here mentioned, are found together with the oval brooches in female tombs. The men evidently did not wear many ornaments besides the heavy arm-ring, generally too costly to be allowed to accompany the owner to his grave, and the weapons, which were very often richly decorated.

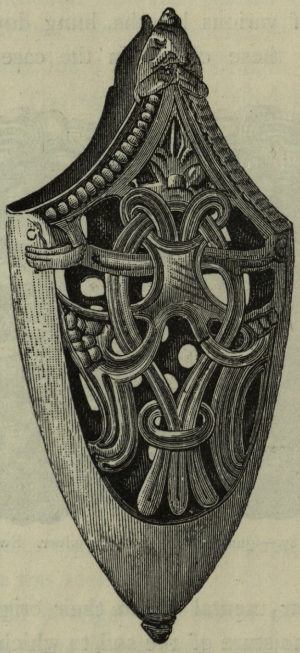


FIG. 88.—End of a sword-scabbard. Norway.

Of the weapons themselves I shall find occasion to speak a little later. But as to the decorations on them we may form some idea by the mount of a sword-scabbard here reproduced (Fig. 88), found in a northern part of Norway. The ornamental pattern is a little confused, but we can still trace the features of a bird; the beak is almost completely lost in the upper corner; the two feet are

extended in a way most unnatural to a bird, on both sides, until they reach and grasp the border. To satisfy the exigencies of conventional art the body has got a wide opening; the two wings and the three feathers of the tail are quite distinct. That the bird was in favour as an ornamental pattern is seen also by Fig. 89, a falcon-shaped fibula from the isle of Öland. As birds of prey occur in Scandinavian mythology we cannot be surprised to find them adopted in ornamental art. Probably the quadruped, much more commonly used as ornament, is also connected with some animal appearing in mythic legends, but,

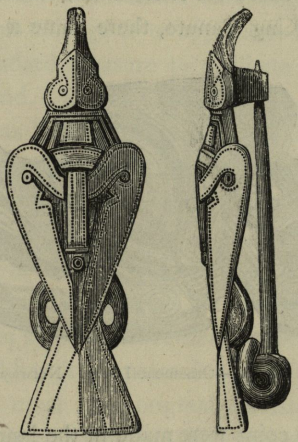


FIG. 89.—Falcon-shaped fibula. Sweden.

as yet, it has not been possible to give to this animal, so fantastically transformed, a name belonging to zoological terminology.

A splendid example of this cherished type of ornamental zoology is given in Fig. 90. The original, found in Norway, is made of bronze and plated with silver.

When speaking of the characteristic features of the later Scandinavian Iron Age, it is not more than just to pay a special attention to its rich store of silver.

Foreign coins were introduced into Scandinavia, as I have several times had occasion to remark, but an indigenous coinage was not established, as also has been mentioned, until very late, at the commencement of the eleventh century. We cannot be surprised at its late appearance. Civilisation in the north was not so far developed that the conditions without which an indigenous coinage is impossible could be fostered. That it begins to appear at the earliest possible moment is clearly shown by the fact that in Sweden, when Olof Skötkonung had struck coins after the patterns of those made by King Ethelred II., and when his son and successor Anund had taken as models for his own the coins of King Canute, there came a period in which, as

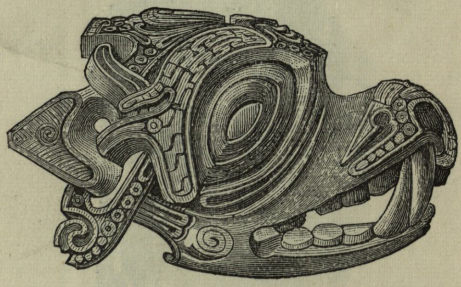


FIG. 90.—Ornamental head. Norway.

far as we know, no coins were made in the land. We cannot with any certainty, or even probability, attribute any of our known anepigraphic coins to this period. This circumstance is, perhaps, only to be explained by our present want of information, but I think the absence of coins of this period is real, and finds its best explanation in the general state of the land. The period in question, full of troubles and of bloody conflicts, is rich in names of kings, but of those kings nothing more is known than the names, neither their deeds, their ages, nor their exact position. Through favourable circumstances the Swedish nation had entered into the domain of history, but it was not really ripe for

this important advance, and no sooner did the special circumstances that had favoured it disappear, than it relapsed into a condition that must be referred to a prehistoric, or as we now more logically must say, an unhistoric period. In Norway the conditions were different. There the historical period, once fairly introduced, continued without interruption down to the middle ages, when Norway lost its independence and was made a province under Denmark. From that period and down to comparatively recent times the history of Norway made a part, and a very important part, of Danish history.

But a people that is not advanced far enough to perceive the want of an indigenous coinage or to appreciate its advantages, has still need of a standard measure to facilitate the exchange of products of every kind. For that purpose was doubtless used in pagan time, as well as later in the middle ages, the measure of ells and hundreds of ells for worsted cloth (*Vadmal*), and also, as we learn from archæological facts, precious metals cut into pieces and determined by their weight. In the earlier Iron Age, especially towards its end, ring-money of gold was in common use. Of the units of weight no historical notices are preserved. To find the system of weights then used, we are referred to the ring-money itself; but to solve the riddles it proposes is very difficult, as, even in assuming that there must have originally existed a tendency to give to every piece of ring-money a definite weight, entering as a unit or a multiple of the unit in the accepted system, we still have to ascertain whether every piece which we have occasion to observe retains its original size and weight, or if some greater or smaller piece has been cut off from it.

Mr. Soetbeer, an eminent German economist, some years ago directed his attention to this important subject, and obtained from the officers of the Archæological Museum at Copenhagen indications of the weight of every piece of golden ring-money preserved in that unusually rich collection. On obtaining the figures, and making his calculations, he arrived at the

disappointing conclusion that the weight of all this ring-money has not been determined by any system at all. I myself having later on taken up this problem, and supposing that the failure of Mr. Soetbeer depended upon the fact that he was operating with the weight of all the gold rings of the Museum of Copenhagen both intact and mutilated, took care, when commencing my studies in the Museum of Stockholm, to omit any pieces which were not evidently intact. I have come, I think, at least very near to the discovery of a prevailing system. My observations are not finished, therefore it would not be wise to enter here into any details. I will only mention, as it may tempt others to direct their attention to the subject, that I believe I have found a system, the unit of which is in some way connected with the weight of the gold stater of Philip of Macedon, whose coins were accepted with avidity by the Celtic tribes inhabiting Western and Central Europe. The earliest standard of weights adopted in Scandinavia would hence seem to point to an intercourse with the Celtic tribes of Central Europe, corresponding with Professor Bugge's supposition that the Scandinavian runic letters have their origin in a Celtic transformation of the Roman alphabet.

In the later Iron Age the gold standard was followed by a silver standard. This may appear a bold statement, but it is supported by the fact that ring-money was then no longer made of gold, but of silver.

Scandinavian Sagas relate that sometimes a man possessing a valuable ornament, but wanting the means necessary to buy food for the day, was obliged to cut up his ornament and use the pieces as money. The authenticity of such legends is corroborated by the finds: in them fragments of the most costly ornaments abound, evidently chopped into pieces. If the production of such ornaments, and the skill which they display, is a proof of a certain advance in civilisation, an indication in the opposite direction is undoubtedly forced upon us when we see an ornament cut to pieces and bartered away; in such a case the value

of the silver was estimated, but the time, the skill, and the taste bestowed on the working of it, told for nothing. This giving away of an ornament as money can hardly have been a rare occurrence, as we see points indicating the weight on several bracelets of this time.

To discover the standard of weight of this later time, we have the results of many researches—the ring-money, the ornaments of a certain weight, and the weights themselves. Occupied, also, with this chapter of the economical history of Scandinavia, I have satisfied myself that most of the weights found, and some of the silver rings, are determined after a system introduced by the Khalif Al-Mamum for weighing gold and silver. Not to speak of other things, even the weights found in Scandinavia (as well as in Russia) and the manner in which the multiples of the unit are indicated, show the most complete analogy with some Oriental weights found in Persia, which I have seen in Vienna.

But at the same time when this Oriental system was used in Scandinavia, there was employed another system, the same with that used in the Scandinavian middle ages, and then divided into *mark*, *öre*, and *örtug* (1 mark = 8 öre = 24 örtug).

The intimate connection between weights and money in Scandinavia is clearly demonstrated by the circumstance that the three names of weight just mentioned were in later times used as names for special kinds of money, though these did not retain the weight originally indicated by the name. Even to-day the word *öre* is used in Scandinavia as denoting a coin.

The silver, so richly supplied in the later Iron Age, must have been brought, as has already been mentioned, from the East. Together with silver as simple metal, and Mahomedan coins, ornaments have also been supposed to have come in this way in considerable numbers. That such an importation has to some extent existed I grant, but I must protest against the supposition that all the ornaments of the silver treasures found in Scandinavia are to be

referred to an Oriental source. Observing the ornaments in silver found in the countries where Mahomedan coins occur, Scandinavia, Russia, Slavonic Germany, and Poland, and found also very often with the coins, we see that every large district has representative types of its own, differing more or less from those

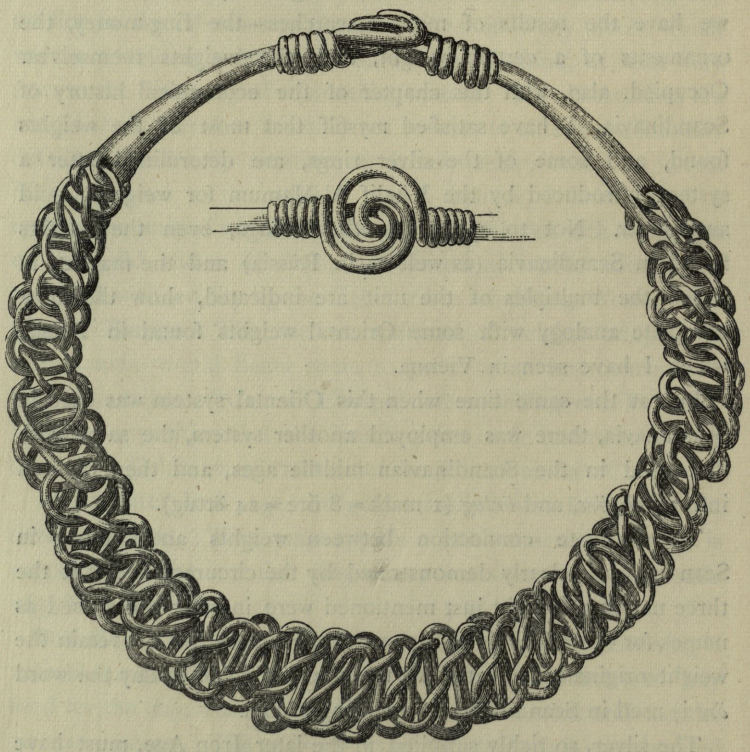


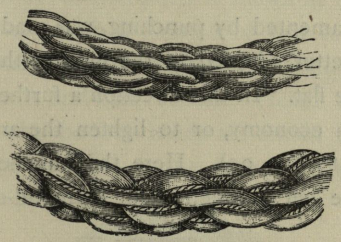
FIG. 91.—Bracelet of silver wire. Sweden.

of other districts : that some differences exist even between the silver ornaments found in Norway and those of Sweden cannot be denied. But this discrepancy in development, taken together with a certain resemblance in some principal types and a great analogy in technical respects, cannot readily be accounted for otherwise

than by admitting the indigenous origin of most of these ornaments within the land where they are found. Nevertheless, a strong Oriental influence may be observed.

We will now consider some of the most important types of this interesting series.

In Fig. 91 is represented an arm-ring, found in Central Sweden together with 137 Swedish coins of King Olof Skötkonung, and many other coins from England, Germany, &c. It is composed of loosely-twisted silver rings, the extremities of which are hammered together into solid pieces which gradually diminish towards the ends. The extreme ends encircle each other and form a graceful knot, the even structure of which is seen with sufficient clearness in the figure.



FIGS. 92, 93.—Fragments of twisted silver rings. Scandinavia.

The loose twisting of this ring is not so common as a more solid and closer knotting here represented by Figs. 92 and 93, one taken from a girdle, the other from a neck-ring. Both are composed of pairs of twisted wires, in the one (Fig. 93) a finer twisted wire is inserted between the two thicker ones. The pattern, though very simple, is well applied, and the skill with which the hammer has been wielded is admirable: every single wire being hammered in a regular diminishing thickness towards the ends. Without the greatest care there would have been a want of uniformity and proportion in the continuity of the pattern, which has, however, been altogether avoided.

The same pattern is used for arm-rings and finger-rings.

Bracelets were often solid. One comparatively ancient is reproduced in Fig. 94; it is octagonal in section, with punched ornaments on three of the sides. That this type has been imported from the East seems to me most probable. Once introduced into Scandinavia, it was developed in two directions: the exterior side,

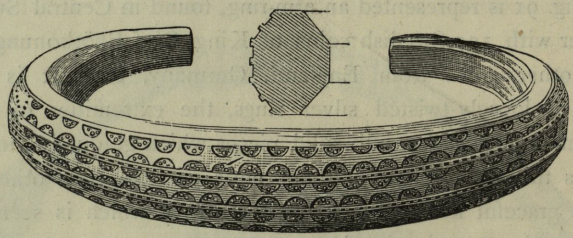


FIG. 94.—Bracelet of silver. Gotland.

in every case ornamented by punching, was made larger, and the inner part was better adapted to the form of the human arm by being made quite flat. In this direction a further step was taken, when, either from economy, or to lighten the armlet, the interior was hollowed out (Fig. 95). Here the punches have been triangular, and have left between them diamond-shaped spaces of

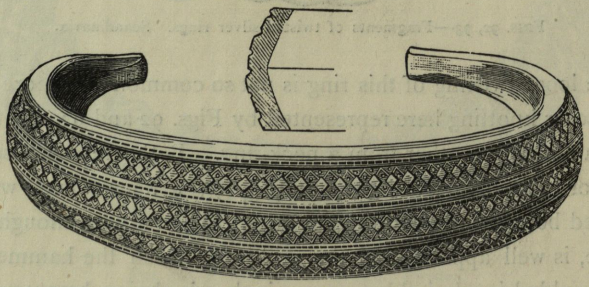


FIG. 95.—Bracelet of silver. Sweden.

the original surface; every triangle is divided into three compartments, and in each compartment there is a point. The ends have a faint likeness to an animal's head.

The analogy between this bracelet and another here reproduced

(Fig. 96) is obvious : it has no tapering ends, and the decoration, which is much richer, is formed by two punches, one triangular, the other diamond-shaped. We have here a specimen of the second line of development.

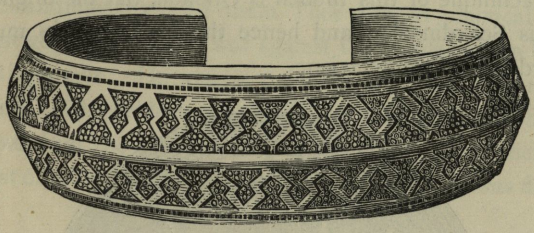


FIG. 96.—Bracelet of silver. Sweden.

Another class of silver ornaments is shown in Fig. 97, a circular brooch, the rim of which is formed of two twisted wires, and having at the centre a pattern originally representing four animals with triangular heads and bent bodies. Heads and bodies have now been separated : the four heads are united into a circle, and from each neck two bands spring forth, in their continuation

FIG. 97.—Circular brooch, silver. Sweden.

forming loops in combination with the ring which unites the heads. The origin of the pattern is one thing, its present state another, and regarding exclusively the latter, we must allow that it possesses a great deal of gracefulness. The interstices

between the lines of the pattern are completely filled in with fine grains soldered upon the bottom plate.

Another specimen, retaining more of the animal character of the ornamentation, is given in Fig. 98.

The technique of this brooch is Oriental, but the origin of the pattern is Scandinavian, and hence the workmanship must also be regarded as Scandinavian.

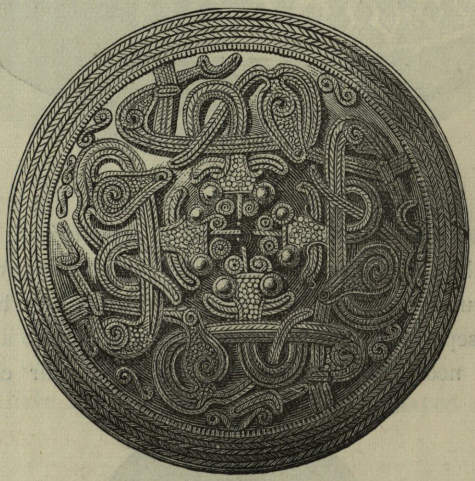


FIG. 98.—Circular brooch, silver. Sweden.

We arrive at the same conclusion in proceeding to the study of Fig. 99, a pendant attached to a three-cornered ring, united to a very fine neck-chain. It is quite perfect, but not to occupy too much space, I have here figured only the pendant. This is of very great interest, and of good workmanship. The twice repeated *triquetra* has probably some mythic significance. In the upper part is seen the rudiment of an animal face, having two eyes, and between them a long and straight beak or nose, a representation that could be regarded equally with the terra-cottas of Mr. Schliemann as an image of the owl of the goddess Athene. Such an interpretation is here impossible,

whatever validity may be assigned to the interpretation given to these figures, with so earnest a conviction, by the energetic explorer of Hissarlik and Mycenæ. As to the pendant itself, it is doubtless an amulet, connected with the pagan religion of the Scandinavians. To them Thor was, in practical life, the mightiest god. He waged war against the giants, whom he killed with his hammer. He was, at the same time, the tutelary god of the home. The bride was hallowed by a touch of his hammer; to honour him the newly-married couple in entering their house went first of all to the hearth where the purifying fire was flaming;[1]

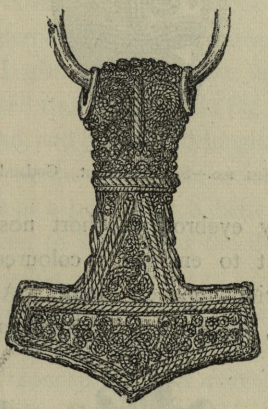


FIG. 99.—Amulet of silver. Sweden.

by means of his hammer the funeral fire was hallowed. On some pagan stones occurs the phrase, "May Thor hallow these runes!" Under such circumstances a symbol of the hammer of Thor must have become a cherished amulet. Diminutive hammers in iron or silver used for that purpose are also found, some perfectly realistic, others conventionalized as the one here figured.

[1] The custom still prevails, though the sacrificing at the hearth is, of course, abolished. Every custom demands a reason, and the newly-married couple now go to the hearth of the kitchen—to taste the soup.

Having in the preceding pages given a great number of animal representations which enter into the ornamental world of the Scandinavians, I think it well to add Fig. 100, a pendant which, with many of the same kind, has been attached to a necklace. The contours are those of a serpent's head; the face, however,

FIG. 100.—Silver pendant. Gotland.

is human: a heavy eyebrow, a short nose, two round eyes —presumably meant to enclose a coloured stone; a mighty moustache, and a widely-opened mouth. As I have hinted on a previous occasion, the ancient Scandinavians, at least in their

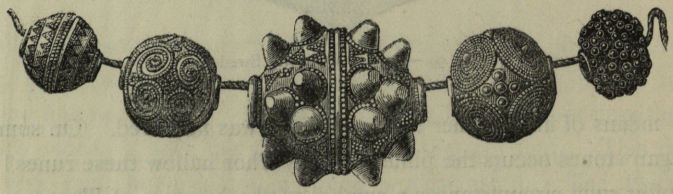


FIG. 101.—Silver beads of a necklace. Gotland.

vigorous days, seem to have worn only a moustache, never a beard, this being perhaps reserved for the old men.

Of the beads constituting the necklace to which this pendant belonged, Fig. 101 gives some specimens. They are delicately formed of thin silver-plates with filigree decorations.

This necklace was found in a bronze vessel together with a great treasure of bracelets, pendants, &c., and coins, no one of which was struck after A.D. 1000.

I have already remarked in the preceding chapter that alongside the animal patterns characteristic of Scandinavian art, there appear, especially in silver and gold, geometrical patterns, introduced probably from the same quarter of the world that provided the materials in which they are worked. But the models, once introduced, were speedily adopted, being thus made indigenous.

The Scandinavian collections possess a great many articles in silver with perfectly indigenous ornamentation, and quite as well executed as those which show traces of a foreign influence. The principal patterns having been already reproduced in one way or another, I give here only one figure—a pin, to which a highly ornamented ring is attached (Fig. 102), found in a tomb in the isle of Björkö, and probably belonging to the ninth century. Any observations on the details are quite superfluous. It is a magnificent object of a pure style, a better example than all the figures already given to show what the Scandinavian art of the pagan time was capable of. The man who possessed this jewel, it is true, was probably a Christian, one of the converts of St. Ansgar or of his disciples; nevertheless, this circumstance does not alter the conclusions here arrived at. The conversion brought about by the mission of St. Ansgar, who was sent to Sweden by the Emperor Louis le Débonnaire, was of short duration; it seems as if the Christian colony afterwards relapsed into paganism. Be that as it may, whether the man was a Christian or not, the pin belonged to him not in his religious quality, but as a member of the Scandinavian nation.

In an earlier page I have spoken of the ring-brooches common in Irish and Scottish finds, and figured, for instance, in the work of Mr. Anderson, already quoted. What was the relation between these Celtic ring-brooches and those found in Scandinavia? There must have existed some connection

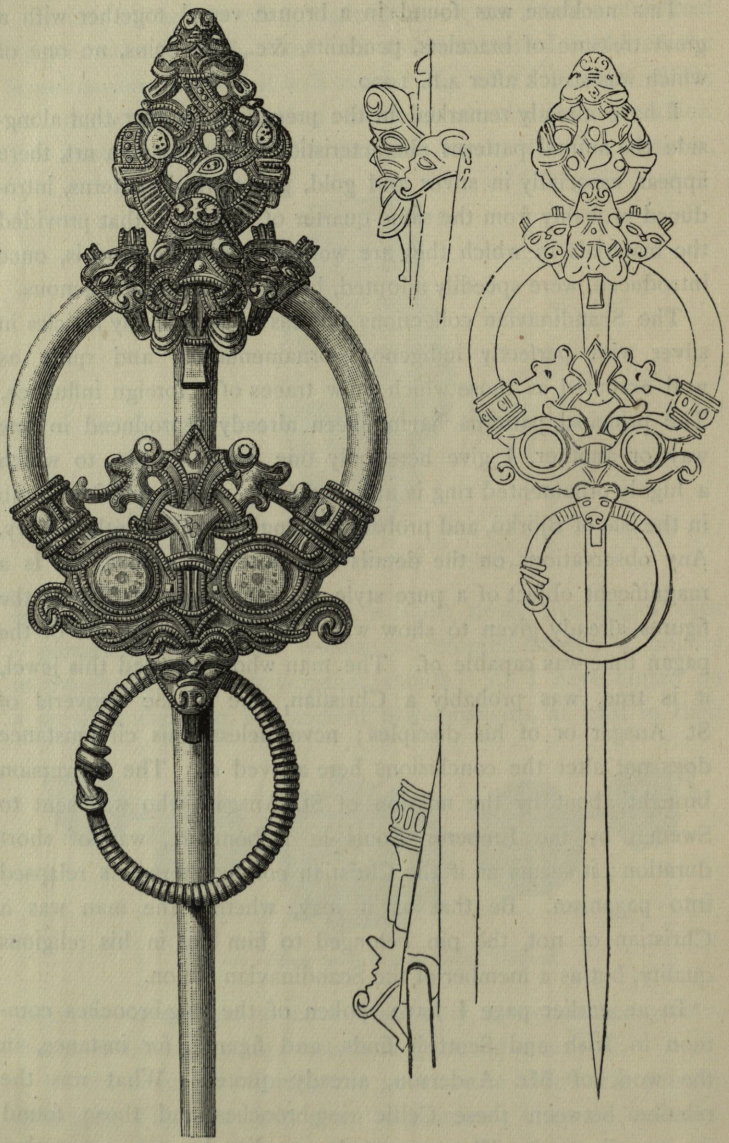


Fig. 102.—Pin with annular appendage, silver. Sweden.

between the two groups, but how to determine it must be left for further considerations. It is evident that on neither side can we speak of a slavish imitation; it is more likely that we have two independent developments from one common source. To my eyes the best of the Scottish and Irish specimens are far richer in their ornamentation than this one, although none are equally good in design.

The rich decorations in filigree work having a decidedly exotic character, to be attributed, as I suppose, to a strong foreign

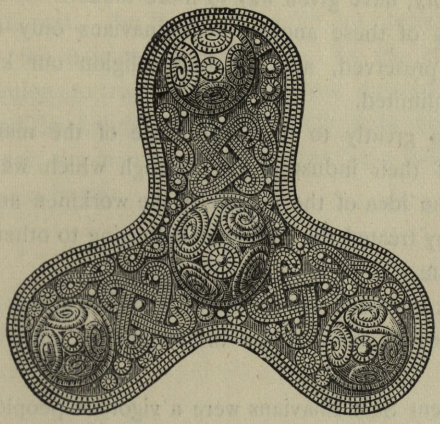


FIG. 103.—Trefoil-shaped fibula, silver. Norway.

influence, it will not be amiss to add one more proof to show that this fine work was really exercised in Scandinavia. I have already mentioned that trefoil-shaped fibulæ are characteristic of the later Iron Age of Scandinavia. Their surface is usually covered with ornaments of a decidedly Scandinavian type. In Fig. 103, we see a fibula of this kind with graceful filigree ornaments.

If before concluding, we turn once more to survey the vast field we have rapidly passed over, every one will acknowledge, I hope, that the Scandinavian art of old has a very distinct

character, involving considerable merits, as also undeniable defects. From the industrial art of a nation conclusions may be drawn as to its history and its intercourse with other nations; we may likewise infer matters of greater moment, as for instance the nation's genius, that looked out for and found fields for its activity elsewhere, and of a higher importance on the whole than that of industrial art—the fields of religion, thought, politics, &c. The governments created by this original Scandinavian genius, in their first commencements but slightly illumined by the light of history, have given way to more modern institutions. Of the thoughts of these ancient Scandinavians only rare records have been preserved, and of their religion our knowledge is exceedingly limited.

This adds greatly to the importance of the many surviving witnesses of their industrial art, through which we can gather at least some idea of the genius of the workmen and the mode in which they treated the problems belonging to other and higher spheres of life.

I will not encroach on the space at my disposal by indulging in wider speculations. A few brief remarks may, however, be permissible.

The ancient Scandinavians were a vigorous people, and in the course of centuries their vigour increased, until they exhibited a marked preference for what was massive, too often becoming clumsy.

Of their own nationality they had a very decided sense. Being exposed to foreign influences, even in their distant corner of the European world, they did not permit themselves to be overwhelmed by them. What struck their fancy they adopted, and gave to it a national development.

Not only did they love what was strong, mighty, and brave; they could not even abide what appeared weak and empty. When they wished to represent what was powerful and strong, ornamentation was altogether left out, but they employed it in

all other cases. The patterns they cherished furnish us with some indications of the originality of their genius. All these contorted animals, usually twining round themselves, and at a first glance apparently vanishing in a maze of arbitrary windings, yet never losing themselves, reveal to us a mind that loved deep speculations, and strove to enter into the very depths of life, even should such a struggle be inseparable from a certain degree of self-torture.

In drawing these conclusions, I have dwelt exclusively on the most perfect and most pregnant phases of the industrial arts of Scandinavia. But these phases did not always keep themselves upon the heights of excellence. In the changes from first germination to rich blossoming and onward to fruitful maturity, and in falling from this noble state down to even repulsive decay, the ancient Scandinavians have only shared the fate of all that is human.

TECHNICAL OBSERVATIONS.

Iron.

In commencing our review of the technical ability and procedure of the time, it is only reasonable to give precedence to some remarks upon the treatment of iron, that metal which has given its name to the period we are now considering, and of which were exclusively made the implements most essential for use in the cultivation of the soil, for the supplies of the necessities of daily life, and for use in war.

I have already remarked that the iron mines, which at a later time have made Sweden famous, were not known in the prehistoric times of Scandinavia. The art of mining was not introduced into the North earlier than the middle ages. But in several parts of Scandinavia bog iron-ore (in Swedish, *myr-malm*) exists in great quantities, and this was freely used. There was even in Sweden a district, in the lower valley of Dalelf or the river of Dalecarlia, which from its rich deposits of iron-ore had the name of *Jernbæraland*, or the land producing iron. The old saga of the Norwegian king Sverre, who died A.D. 1202, speaks of his visit to this iron country, he being a fugitive from his native land. If we may regard as authentic every detail of the narrative it is necessary to assign to this district much less importance than its name seems to indicate. The saga says that Jernbæraland was then for the first time visited by a king; this is quite probable, but it adds that the inhabit-

ants of the district were so rude that they did not know if "kings-men," the followers of the king, were men or animals —an ignorance which must have been impossible in a district connected by commerce with other parts of Scandinavia. Happily archæological facts enable us to test this account, and the conclusions which would have to be drawn from it. In the lower valley of the river just mentioned, on the frontiers of the provinces of Uppland, Gestrikland and Dalecarlia (in Swedish Dalarne—the valleys), in a district where almost every peasant owns a field, which is appropriately called the slag field, and where in the sepulchres, of both the earlier and the later Iron Age, large pieces of slag occur between the stones of the cairns, here antiquities have been found, which must have been brought from several remote regions. There is no reason why articles from different provinces should have been brought together in this place, had not they who brought them found it profitable or necessary to come there for something that was to them of the highest importance and which existed there in large quantities.

To those who wish to study the iron implements of ancient Scandinavia, a better opportunity is offered in the Norwegian than in the Swedish collections. This circumstance is curious, as in most cases there exists the most complete correspondence between the industrial arts of Norway and Sweden. The difference in this respect can only be explained by supposing a difference in the funereal customs in the two countries.

The technical qualities of the iron arms and implements belonging to this period have not been subjected to an examination corresponding to the great importance of this question. I may, however, refer to the researches of Captain O. Blom, of Copenhagen, who has examined some fragments of swords and spear-heads belonging to the earlier Iron Age of Denmark. He found some of them consisting of soft iron, others, on the contrary, of good steel. From the accounts given in the Icelandic literature it is presumable that to a weapon

of iron was often affixed an edge of steel. It is to be hoped that the attention of practical men will shortly be directed to this interesting subject, and that they will not omit, in making researches in this direction, to consult the archæologist, as it is necessary to be most careful in selecting fit objects for examination. I will not speak of those objects which have been very considerably damaged by rust, as their unfitness for the purpose is evident, but it is also needful to remember that the swords and spear-heads, bent or contorted, found in tombs containing the burnt relics of the warrior, may have been altered by being exposed to the heat of the funeral pyre.

In working iron the ancient Scandinavians have shown a great deal of technical skill. Some hatchets are found the edge of which is so well preserved that the finder has been able to use them after a little sharpening. Even more skill is displayed in the decorative work bestowed upon the iron weapons, as is shown in many specimens preserved in the collections; the weapons being regarded as trusty friends by the warlike Scandinavians, we cannot be astonished that so much care was given to the smallest detail of their ornamentation.

When the invention of damascening is, as its name suggests, referred to Damascus or its neighbourhood, and, moreover, when the introduction into Europe of damascened work is referred to the nearer relations established by the Crusaders, it must be remembered that damascened work was not uncommon in Scandinavia during the pagan time, and that the objects of iron decorated in that manner are by their shape, and other perfectly unmistakable signs, proved to be products of indigenous art. I have already shown that there once existed, during a period of some length, a continued intercourse between Mahomedan Asia and Scandinavia. To the influence of that epoch we cannot, however, attribute the introduction of damascening into the North, as damascened sword-blades have been discovered in finds belonging to the earlier Iron Age, that is, to an epoch anterior to that in

which Mahomedan industry could have existed in Damascus, and when Scandinavian civilisation was influenced by Roman art. The early appearance of damascened iron in Scandinavia, combined with the circumstances under which it appears, gives strong support to the theory that damascening was known to the Romans during the time of the emperors. That the intercourse between the Roman provinces and Scandinavia was influential, especially in respect to swords, is proved by two swords found, one in Norway the other in Sweden —analogous finds are more numerous in Denmark—the blades of which have punched on them in Roman letters the names of the smiths, RANVIC and ROMARIC. Both names (the latter occurs on a sword lately discovered in Sweden) enter completely into the group of names found under similar circumstances in Denmark, and give support to the theory advanced there that the workmen were not Romans—the swords indeed have not the type of Roman swords—but probably belonged to a Teutonic tribe that stood in the most intimate relations with Roman art.[1]

Damascened blades, occurring in Scandinavia, not only in the earlier Iron Age when the Roman influence was felt, but also in the later Iron Age, is in my eyes a positive proof that the art of damascening itself had become indigenous in the North. We must not expect to find the same polished surface, with the manifold windings of the patterns, which gives to Oriental damascened work its delicate beauty; the long exposure to moisture, and other destroying forces, have made the surface of the Scandinavian swords very rough, and the material that was hammered into the lengthened grooves of the blades is in most cases lost. The damascened parts have generally the appearance shown in Figs. 104 *a* and *b*, both taken from a sword found in the province of Bohuslän, now Swedish, but, in the time we are considering, belonging to Norway.

[1] Cf., for instance, Engelhardt, *Denmark in the Early Iron Age*.

The art of damascening was used in many other ways. Figs. 105 to 108 give some specimens of damascened sword-hilts from Norway and Sweden. The complete hilt, here given, represents a type not uncommon in Norway, but as yet, as far as my knowledge goes, never found in Sweden. The hilt is divided into diamond-shaped compartments, alternately incised and raised. The incised ones have ornaments in bronze, while the raised are covered with strips of silver. The circular incisions with remains of the inlaid material, as well as the strips of silver, now for the greatest part covered by iron-rust, are also seen in the Swedish specimens, Figs. 107 and 108. Another and more

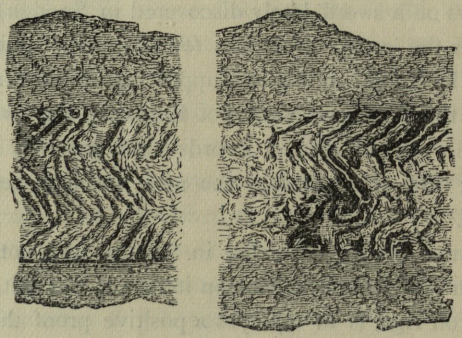


FIG. 104.—Portions of damascened swords. Sweden.

common process was to give the iron a covering of very thin flat wires of bronze or silver, sometimes alternating, which have become, by hammering, firmly attached to the somewhat rough surface of the iron.

More splendid are the silver ornaments often applied to the sockets of the spear-heads. One of the best specimens is reproduced in Figs. 109 and 110. The spear-head is of a very good type, simple and strong; the socket, in its entirety, is damascened with silver, which in some parts retains all its natural brilliancy, and in others shines with a mitigated lustre, due to

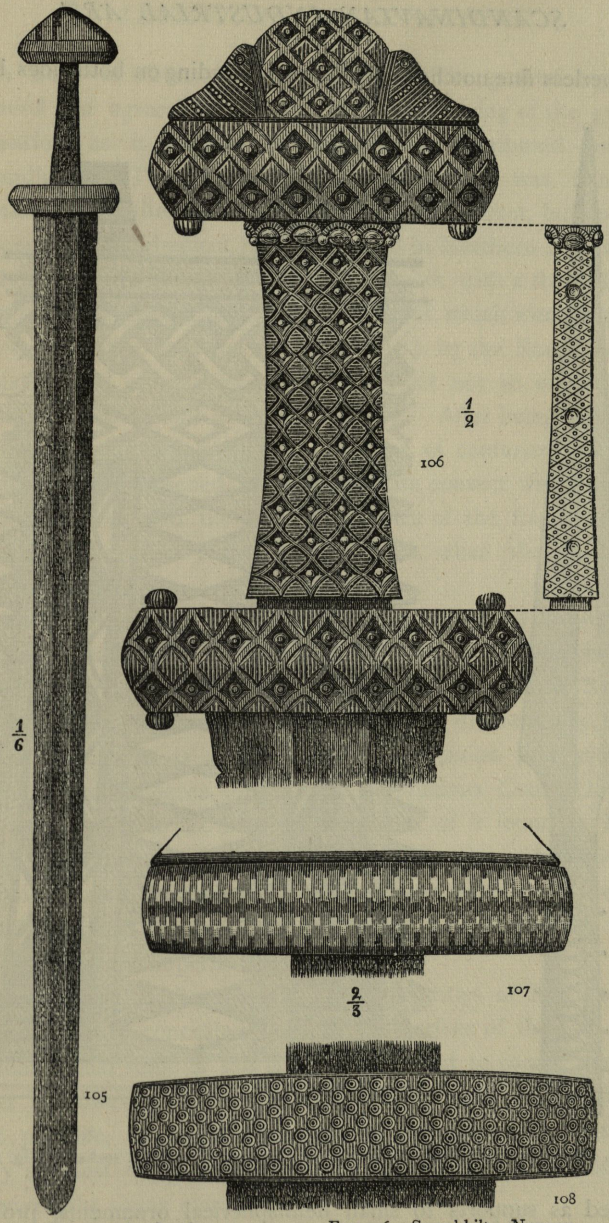
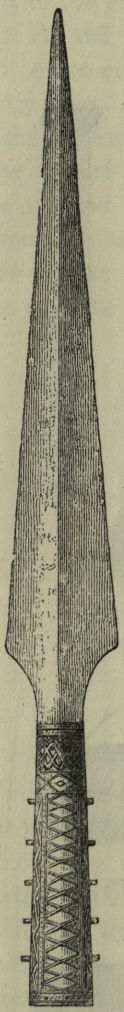


FIG. 105.—Iron sword. Sweden.

FIG. 106.—Sword-hilt. Norway.

FIGS. 107, 108.—Parts of Swedish sword-hilts.

numberless fine notches. The pins protruding on both sides have



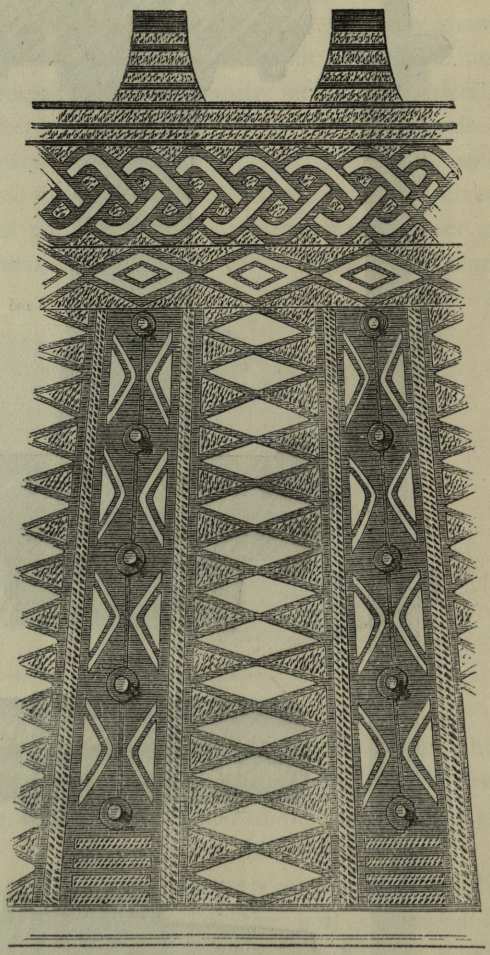


FIG. 109.—Iron spear-head. Gotland. FIG. 110.—The inlaid socket of Fig. 109.

served as supports to small hemispherical ornaments, probably

also made of silver, but now all lost. The general aspect is tasteful and agreeable, and this type is deserving of the greatest attention, as it appears to have been distributed over all Scandinavia. The original, here reproduced, was found in Gotland. Another specimen, with a shorter socket, but in other respects almost identical, has been found in Northern Norway.

It was also common to cover the socket with a thin plate of silver, on the smooth and glossy surface of which were engraved those serpentine patterns so dearly loved by the Scandinavians. This method was simpler and cheaper, but not so well adapted to its purpose as that already described. After being subjected to the destructive influences of a course of centuries, the silver plate is often loosened from its intimate contact with the iron, and, I believe that the same experience of the fragility of this covering was often realised at the time when the spear-head was in use.

Another specimen of the good taste shown by the ancient Scandinavian smiths in damascening iron with silver is given in Fig. 111, reproducing a war hatchet found in Sweden. Each side of the blade is ornamented in a different way. This shape of hatchet is so peculiarly Scandinavian that even the Russian archæologists, for instance the zealous Count Ouvaroff, are accustomed to attribute all specimens of it found in Russia to the Scandinavians, principally to the Swedes, either living in Russia, when a Swedish kingdom had been established there, or passing through that land on their way to Constantinople, where they entered the imperial body-guard.

Everywhere in Scandinavia great quantities of iron slag are found, usually concealed beneath the surface of the soil. It is probable that some of this is to be attributed to pagan times ; to refer it, however, with any semblance of certainty, to any date is not possible, as the primitive way of procuring iron with the very simplest expedients out of the bog iron-ore unquestionably survived the pagan epoch.

Sometimes pieces of iron are found prepared for an intended use, but which have never been finished. To the technical study of the pagan iron-work of Scandinavia they may prove of great importance.

Iron at this time was hardly ever cast; it was hammered, as we have seen, and, as a close scrutiny of the contents of the Scandinavian collections will show, the hammer was wielded with a great deal of skill. The iron was sometimes hammered into very thin and large pieces which served for the fabrication of helmets, shield-bosses, cauldrons, &c.

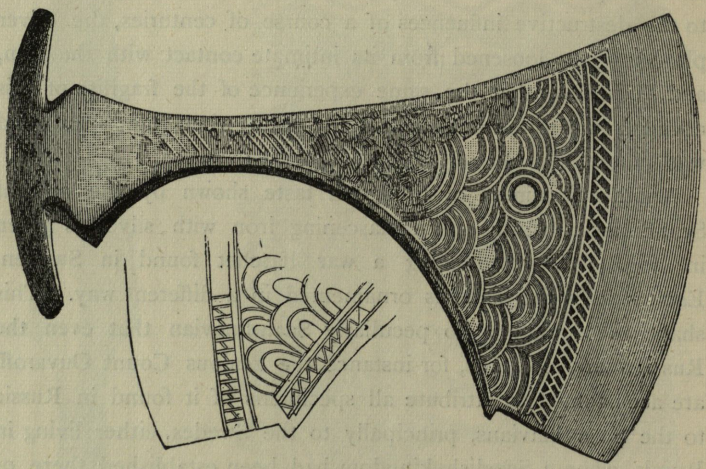


FIG. 111.—Hatchet, inlaid with silver. Sweden.

Although manners in some respects of patriarchal simplicity must have been prevalent during the Scandinavian Iron Age—and to the present day, not only the Scandinavian peasant in more remote districts, but even the burgher retains in a high degree his inherited propensity to trust in the honesty of his fellow-creatures—nevertheless, a necessity was sometimes felt, to keep the more costly things under lock and key. Already in the pagan time padlocks were known. The care of the keys was entrusted

to the lady of the house, who, according to a very old law-formula, was "married to lock and keys." From sundry law-texts, of the early middle ages, we may infer that the keys hanging down from the girdle of the housewife were two in number. Also, in the tombs of Björkö, where the sepulchres with unburnt bodies

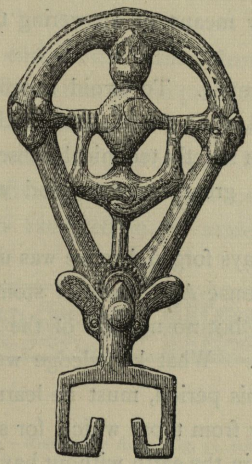


FIG. 112.—Bronze key. Sweden.

have given the best opportunity for studying the indigenous customs of ancient Scandinavia, Dr. Stolpe has generally found a pair of keys in the female tombs. The keys were made either of iron or bronze.

BRONZE.

Iron was, as we have seen, found in Scandinavia, but the bronze used there was doubtless imported. When broken objects were melted down, the material was, of course, used to make new ones. But evidently the Scandinavians were not limited to a stock imported at some previous time; on the contrary, through

the whole Iron Age we cannot find a single indication that bronze was so costly a material that any economy was needed when using it.

Many bronze ingots have been found in Sweden, long and nearly cylindrical, with one flat side. They may, with great probability, be referred to the Iron Age. Unfortunately they do not afford us, as yet, any means of answering the question whence they came.

I speak here of bronze. To avoid misconceptions, it is however necessary to add, once for all, that in the Iron Age bronze, taking the word in its strictly technical sense, was never used, as the copper was in a great degree mixed with lead, and even with zinc.

While iron was always forged, bronze was usually cast. Moulds belonging to the Bronze Age, made of stone or bronze, are not rare in Scandinavia; but no moulds of the Iron Age have ever, I think, been found. What knowledge we have of casting, as it was practised in this period, must be learned from the objects themselves, especially from those which, for some reason or other, have been deposited in the earth without having been finished.

The oval brooches, of which several specimens have been given in the preceding pages, consist in most cases of a thin, convex, oval piece, with a stronger rim, and a separate ornamental covering case. Traces on the under side of the vaulted plate—the upper side was always polished—lead us to the conviction that such thin plates were cast in the following manner. One half of the mould—probably of clay—being made, its curved surface was covered with a piece of cloth, and to that the other half was closely fitted. The cloth left between the two halves was then burnt away and the metal introduced into the empty space. The mould having received an exact impression of the texture of the cloth, transmitted it, with similar fidelity, to the surface of the bronze.

In one example the liquid metal had not been everywhere

equally distributed, so that a little three-cornered space was left without any metal in it—of course represented in the object when taken out of the mould by a hole. This defect being too slight to cause the rejection of the piece, the hole was covered by a thin bronze plate. This was missing when the brooch was found, but the diminutive rivets used to hold it in its place still remain.

Belonging to the end of the earlier Iron Age of Gotland we have one important illustration of the practice of the bronze-smiths. I beg the reader to turn back to Fig. 33 and submit it to a new scrutiny. The rim of it is reproduced here in all its length (Fig. 113). It is divided into several compartments, one of which has ornaments executed in the same way as those of the

FIG. 113.—Rim of the fibula Fig. 33, not finished.

upper surface. But in the other compartments we see only a pattern formed of delicate lines, executed with a very sharp instrument.

The lesson given by this specimen is perfectly clear. The fibula was cast in the most simple manner, and the surface was polished. The pattern chosen for its adornment was drawn with a sharp point, and as we see here, with a very steady hand. A naked monotonous surface in bronze was, in the eyes of the Scandinavians, not to be endured. The pattern finished, the engraving commenced. The tools were sharp, the eye good, the hand unerring, and the united result was an ornament rich but at the same time distinct, never betraying an error or a correction, however intricate the pattern may have been.

This mode of decoration probably demanded a greater skill

than was to be found everywhere, and, moreover, the more popular a type became the greater inducement was there to look out for easier ways of making it. In Scandinavia the workmen were ruled by the same economical and moral laws as elsewhere.

In the new stage, the increased demand, and probably, also, the laziness of the workmen, led to the pattern being roughly executed in the mould. This being usually of clay, it is very possible that the pattern was simply made by copying an older original. I need not remark how ruinous such a procedure is to good taste. A perpetual copying of a used-up specimen must necessarily lead to a reproduction of ornaments already worn out. It is true that the ornaments were not left as they came out of the mould, but were worked over with chisels and other tools, most lines were sharpened, and the whole was made agreeable to the eye; however, when the design itself was decaying, the good execution of details did not long survive.

As contrasts with the one just now given as to technical treatment, I may call attention to Figs. 114 and 115, both from a rich Gotlandic find, apparently containing the remains of an old workshop.

Fig. 114 represents a large key. The key itself (*c*) is made of iron, and much decayed. The handle (*b b*) is of bronze, and has at the upper end a hole for the end of the chain by which the key was attached to the girdle. The handle is exactly in the same state as when it left the mould; the outlines of the pattern are unmistakable, although every detail is blunt and rough. To the same find belongs another key-handle of exactly the same pattern (*a*), the only difference being that in this instance all the finishing work has been done. We are especially fortunate to get at the same time two pieces representing the two principal stages of work; it is thus possible to make comparisons and from them to draw conclusions.

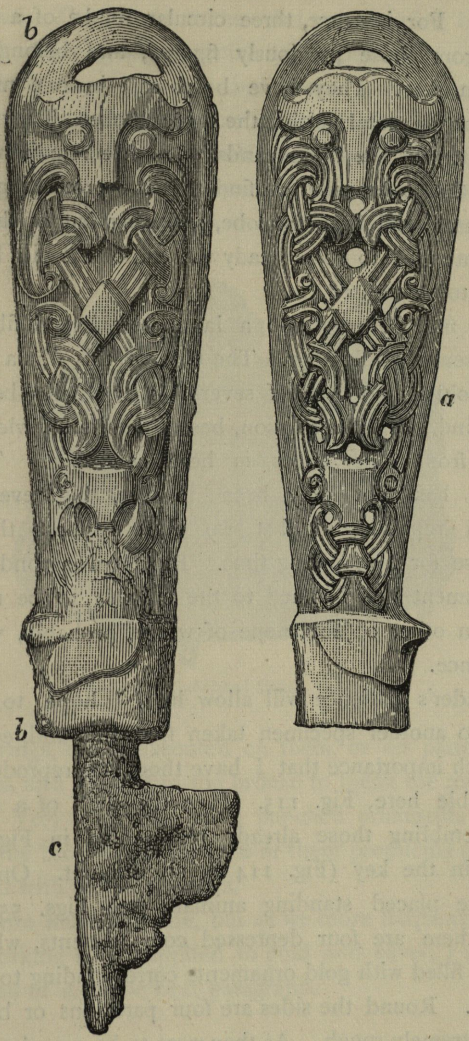


FIG. 114.—Iron key, with bronze handle; one side of the handle of another key. Gotland.

I will mention some other specimens from the contents of the same find. For instance, three circular fibulæ of a type quite different from those previously figured, and belonging to the earlier Iron Age. They have been cast in one mould, with channels for the metal uniting the three fibulæ. They have been left, as cast, with the three bands of bronze remaining; and on examining the under side, we find that the protruding lobes are not perforated, and that the lobe, springing out at the opposite side and intended to keep steady the end of the pin, has not yet been bent to be so used.

To this find belongs also a large bow-shaped fibula of the type represented in Fig. 51. The type of this fibula appears to me much older than those of several other articles belonging to the same find; and this opinion, based on the knowledge I have acquired from other finds, is here confirmed. The fibula apparently has not only been in use, but even broken, and again repaired, so that we must suppose that it had been in use for a very long time. Broken a second time, this costly ornament was doomed to the crucible, to be melted and reappear in other objects, none of which, probably, would rival it in elegance.

The reader's patience will allow him, I hope, to give some attention to another specimen taken from this find, especially as it is of such importance that I have thought a reproduction of it indispensable here, Fig. 115. It is the shell of a box-shaped fibula resembling those already represented in Figs. 55—58. Here, as in the key (Fig. 114 *c*), all is blunt. On the upper surface are placed standing animals (see Figs. 55 and 57). Between them are four depressed compartments, which should have been filled with gold ornaments corresponding to those seen in Fig. 58. Round the sides are four partitions or bands which are left extremely rough. As they were to be completely covered by silver plates, as in Fig. 55, it was not necessary to ornament them; we can even see indications, left by the mould, of the

holes through which these appendices were to be fastened to the brooch itself. The panels at the sides are occupied by confused groundwork of the usual serpentine ornament.

In the later Iron Age thin and broad bronze plates do not occur; this period had too great a predilection for massiveness. The smith who restricted himself to working bronze had then rarely an occasion to produce anything in the way of *repoussé* work. The cast bronze plates were, as we have seen, sometimes covered

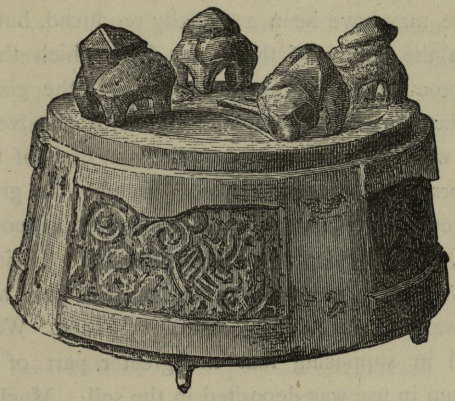


FIG. 115.—Unfinished fibula. Gotland.

with engravings, either executed on them, or on plates made of other metals and applied to the bronze to break the monotony of its colour. Very often also small punched ornaments were scattered over the bronze surface, most of them producing geometrical figures filled with elevated points.

Bronze wire was also made, but as we more frequently find this mode of working metal applied to gold and silver, I reserve the consideration of it to the next paragraph.

Gold and Silver.

That the ancient Scandinavians obtained gold out of the rivers of their own countries is possible, but much of the gold must have been supplied from foreign countries.

The later part of the earlier Iron Age was very rich in gold, which has often a very light colour; this is fully explained by the results of chemical analyses, showing that the gold was mixed with silver. The mixture may have been artificially produced, but it possibly depends on the nature of the mines from which the gold was originally procured. If I am not mistaken, the gold from the Transylvanian mines has about the same alloy of silver as a great deal of the worked gold of the Scandinavian finds of this epoch.

To visitors of the Scandinavian Museums the great number of gold objects, ingots, simple spiral rings used as money, collars, finger-rings, bracelets, &c. must be astonishing. Their richness in gold makes the greater impression, as, at that time, although not absolutely wanting, silver was comparatively rare. We can hardly be justified in supposing that the greater part of the golden treasures then in use was deposited in the soil. Much more must have remained unburied, and, as taste changed, was melted into ornaments of new patterns.

We have seen how the Scandinavians were gradually excluded from the southern world. The Roman empire perished, Slavonic tribes occupied the old Teutonic districts to the south of the Baltic Sea and of Denmark. But in a favourable time the eastern regions were opened out and silver came into Scandinavia in rich abundance. The sagas and lays of old often mention gold rings and other objects of this precious metal; still the unbiassed testimony of the finds tells us that silver was in the later time the more prevalent of the two precious metals.

In technical respects we find here a greater variety than in the objects of iron and bronze.

Thin plates, destined to cover objects of iron, bronze or wood, or to be themselves ornamented, were hammered out, as were likewise wires, sometimes tapering towards the ends and sometimes exceedingly fine. I have already spoken of the skill revealed in these works—very simple, it is true, but nevertheless easily damaged by an unskilful hand.

Repoussé work in silver and gold is not at all rare. A perfectly even surface soon became monotonous in objects intended to be brilliant, or rich in effects of light and shadow. In their dislike of bare surfaces the Scandinavians were accustomed to ornament every available space, and the ornament generally being exceedingly delicate, the details were apt to be

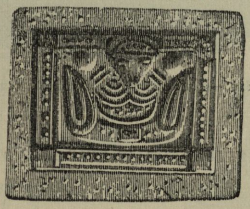


FIG. 116.—Mould for making *repoussé* work. Gotland.

lost in the mass. To avoid this, no better plan could be adopted than to accentuate by *repoussé* work some of the principal features.

There are two ways in which this work may be executed. One of them was by pressing a thin plate of gold or silver well into a mould in which the desired pattern is engraved; and in that way are the ornaments for the side compartments in Fig. 57 produced. I am able to represent, in Fig. 116, a mould used for this kind of work, belonging to the rich find of remains from an old workshop mentioned on p. 132.

In the other way, the metal being fixed to an elastic cement, was pressed out from the back or beaten in from the face. One of the best specimens of this kind of workmanship is the

cup, Fig. 117. The marks of the hammer are still evident, but a complete harmony pervades the general shape. On the upper rim and in the bottom (Fig. 118), serpentine animals are engraved in a purely Scandinavian style. The engraved spaces are gilt.

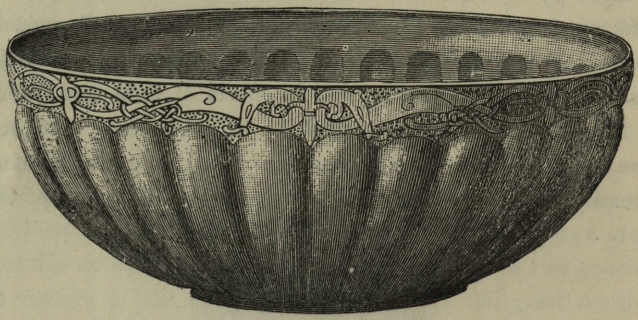


FIG. 117.—Silver cup, partly gilt. Gotland.

In our time gilding may be effected in various ways. During the Bronze Age of Scandinavia gilding was practised, but it

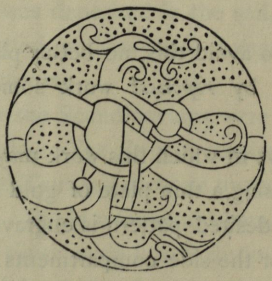


FIG. 118.—Bottom of the cup, Fig. 117.

seems generally to have been effected by coating the places where a higher splendour was wanted with exceedingly thin gold plates. In the Iron Age we find bronze as well as silver gilt, and, as is well shown in the cup just mentioned, the gold,

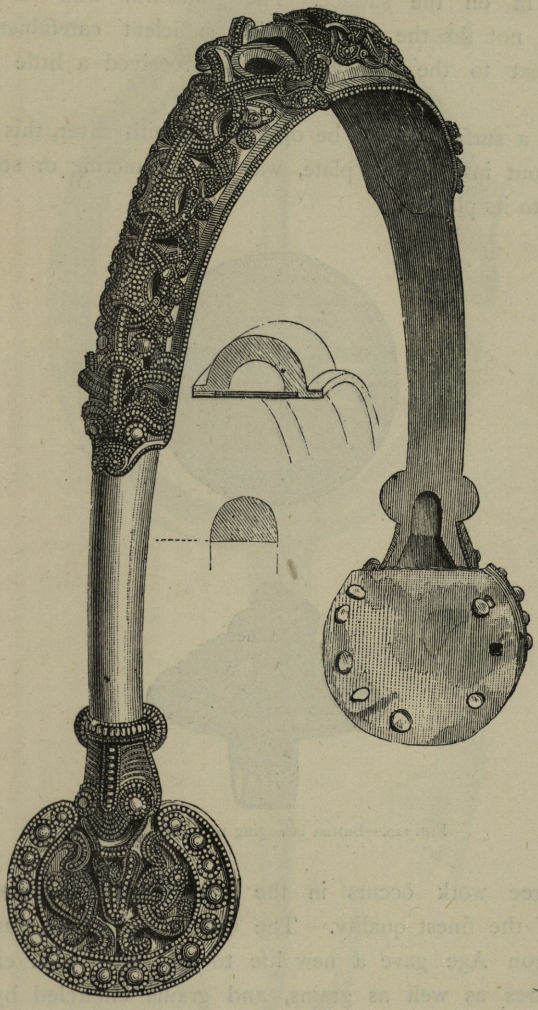


FIG 119.—Golden spur, filigree work. Norway.

being reduced into powder and mixed with some fluid, was rubbed in on the surface. The goldsmith who made this cup did not do the rubbing with sufficient carefulness, the parts next to the rim having also received a little of the gilding.

When a surface was to be ornamented with silver, this metal, beaten out into a thin plate, was by hammering or soldering applied to its place.

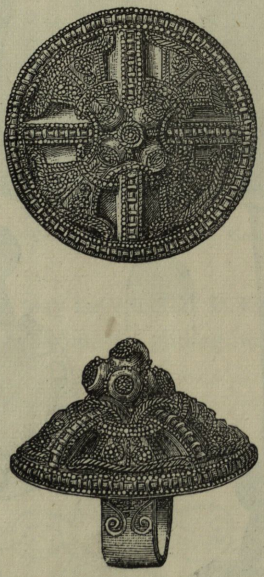


FIG. 120.—Button belonging to the spur, Fig. 119.

Filigree work occurs in the earlier Iron Age and was then of the finest quality. The Oriental influence during the later Iron Age gave a new life to this art, which employed fine wires as well as grains, and grains encircled by a fine wire. Specimens have already been given in previous illustrations. Here I will only add two specimens: one, Fig. 119, a wonderfully well-worked spur of gold; the second, Fig. 120,

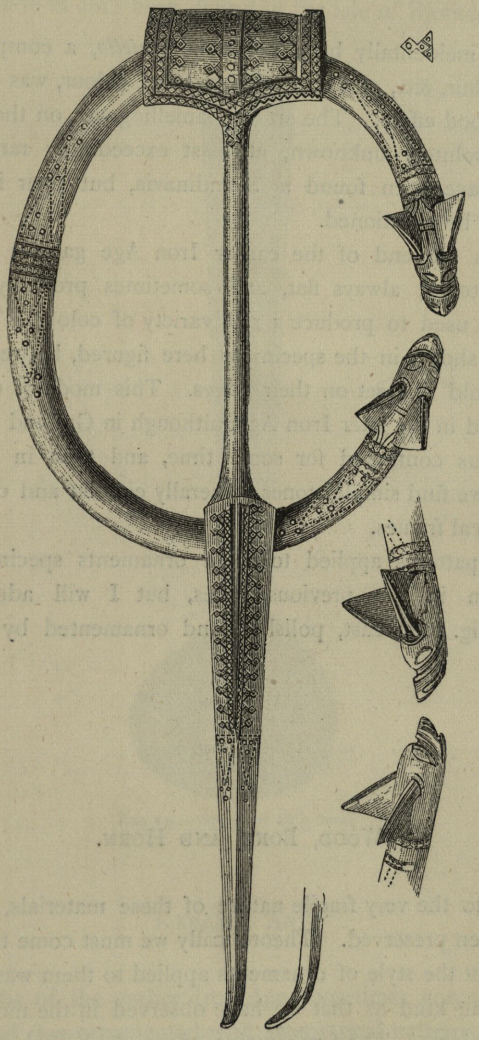


FIG. 121.—Ring-brooch, silver. Gotland.

a circular ornament which has been attached to the strap of the same spur.

As has incidentally been mentioned, *niello*, a composition of silver, sulphur, &c., of a dark blue or black colour, was used often and with good effect. The art of enamelling was, on the contrary, if not absolutely unknown, at least exceedingly rare. Some enamels have been found in Scandinavia, but their indigenous origin may be questioned.

Towards the end of the earlier Iron Age garnets and other coloured stones, always flat, and sometimes probably coloured glass, were used to produce a rich variety of colour. They were placed, as shown in the specimens here figured, between *cloisons* of small gold ribs set on their edges. This mode of decoration disappeared in the later Iron Age, although in Gotland the earlier method was continued for some time, and then in some rare instances we find simple stones, generally circular and convex, set in cylindrical frames.

Of the patterns applied to silver ornaments specimens have been given in the previous pages, but I will add a ring-brooch (Fig. 121), cast, polished, and ornamented by means of punching.

Wood, Bone, and Horn.

Owing to the very fragile nature of these materials, they have seldom been preserved. Theoretically we must come to the conclusion that the style of ornaments applied to them was no doubt of the same kind as that we have observed in the more durable metallic objects. The few remains of wood which have escaped the destroying influences of the centuries which have passed over them confirm this conclusion.

To illustrate the works of this group I reproduce here (Fig. 122) a spoon made of elk's horn, found in the isle of Björkö.

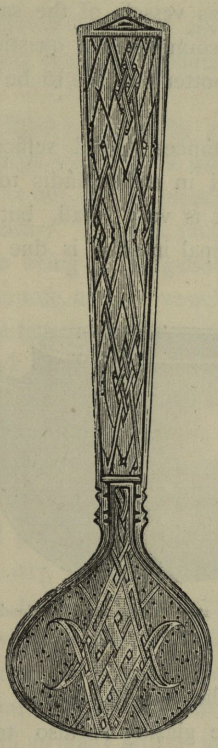


FIG. 122.—Spoon of elk's horn.

KERAMIC ART.

The tombs of the earlier Iron Age sometimes contain vessels of very good clay ornamented with geometrical patterns.

In the later Iron Age the sepulchral vases are of the coarsest description, of bad consistence, simple in form, and almost always

devoid of all decoration. It is not worth while to figure any of them.

In the isle of Björkö vessels of a very superior quality are brought to light; but as vessels of the same kind have often been found in foreign countries, the question may arise if these good specimens of the potter's art are to be regarded as works of indigenous artists.

Under such circumstances it will suffice to reproduce here (Fig. 123), a cup found in a Gotlandic tomb of the very end of the pagan time. It is very small, but its shape is by no means bad. Its principal interest is due to the circumstance

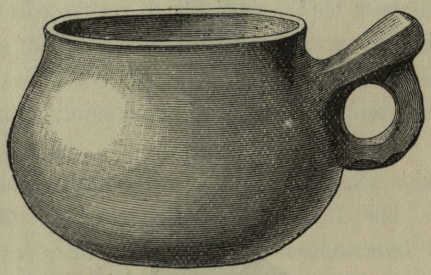


FIG. 123.—Glazed cup. Gotland.

that it is glazed. The handle recalls to me an Oriental type, and probably the glazing is also to be referred to the same part of the world. This important piece was, unhappily, not found during a scientific research. I met with it in a peasant's house among other things found, as he said, in one tomb. The other objects were of a perfectly consistent character, and entirely corresponded with other finds from the same place. Of course the peasant had no idea of the importance of this glazed cup, which then was broken, but has since been restored. I am convinced that his assertion, which was corroborated by his family and neighbours, is to be trusted.

Glass.

In tombs of the earlier Iron Age several glass vessels have been found, all of them probably products of the industry of the Roman provinces.

In the tombs of Björkö especially glass vessels have been found, shaped like huge wine-glasses without a foot. In them Roman workmanship is out of the question, as they must be referred to the ninth century. One, an unfinished specimen, seems to support a claim to being of indigenous workmanship. Still this view is rendered unsafe, as glass vessels of the same type have been found among the remains of the contemporary city, belonging to the vikings, at Wyk by Dorstede, in the Netherlands, a city with which, as is historically known, the city of Björkö kept up a constant intercourse.

As I have already several times alluded to the antiquities of Björkö, it will only be just to add some notice of this spot, which, from an archæological point of view, is perfectly wonderful. Of the buildings of the city, probably constructed of wood, and destroyed about A.D. 1000, no traces exist. Already, in the middle ages, it had dwindled down to a village of peasants. But its site is shown by the vast refuse-heaps, containing the ashes and charcoal thrown out from the kitchens, the bones of animals, killed and eaten, as well as many broken implements and utensils, cast away when no longer fit for use. In one of these refuse-heaps, spread over a large field, at the present day yielding rich crops of exceedingly good potatoes, has been discovered a treasure of silver ornaments and Mahomedan coins.

The remains of the inhabitants have been found in vast cemeteries extending on both sides of the "black earth." Some of them must have belonged to the pagan inhabitants, either living before the first preaching of Christianity, or after that epoch having relapsed into their earlier creed and customs. Others, not having

the exterior aspect of the pagan cemeteries, belong unquestionably to the first Christian community of the island, as is shown partly by the altered funeral customs, partly by objects found in them, for instance, crosses and crucifixes. It was on this island that Saint Ansgar, as his perfectly historical legend tells us, exercised his work of conversion. The intercourse with France, of which his arrival was one of the fruits, is proved by several Carlovingian coins found as well in the "black earth" as in tombs. Such coins are found elsewhere in Sweden and Norway, but never in numbers corresponding to those of the Mahomedan and Anglo-Saxon coins.[1]

Scandinavia in ancient times was not favourable to the formation of cities. The land was in the hands of a peasant population, while in each home was fabricated almost everything wanted by its inmates. Some cities, however, existed, and at places where a renowned temple occasioned at certain times a great throng of men, and on the border between two or more provinces, the superfluous products of one province could be exchanged for those of the others. Björkö has for such a traffic a good situation in the middle of the lake Mälar, giving access to the inhabitants of the three provinces that encircle the lake.

To return to glass: I must not omit to mention the beads of glass which, together with others of coloured clay, silurian fossils, &c., are not uncommon down to the end of the pagan period. They are well made, often showing fine mosaic work, and the colours generally retain their original freshness. They have not

[1] The Anglo-Saxon and German coins belonging to the epoch following that of the Mahomedan commerce are wanting in Björkö. The researches in this isle have brought to light some Anglo-Saxon coins belonging to an earlier epoch: for instance, those of Sihtric, king of Northumberland; of York, with the name of St. Peter; of Edward I. and Ethelstan, the foster-father of the first Christian king of Norway. The absence of the later, and in Sweden more common, Anglo-Saxon coins, seems to indicate that the city of Björkö had lost its importance before the time when the later coins arrived in Sweden.

as yet attracted from Scandinavian archæologists the attention they deserve, and accordingly it would be imprudent to enter here into a discussion of their probable origin. The difficulty of determining this is increased because in searching for corresponding facts in other parts of Europe—Denmark, of course, excluded, as well as the Finnic and Slavonic world in the east—we meet everywhere a late development, in which the prevalence of Christianity had abolished the earlier custom of depositing in the tombs of the defunct, evidences of their daily life and of their industrial art. There are few epochs in the history of Europe in which we are so ignorant as to the state of industrial art as the early Christian period in the different countries, when altered customs deprive the archæologist of materials for pursuing his studies, while historical records are still very scarce.

Textile Fabrics.

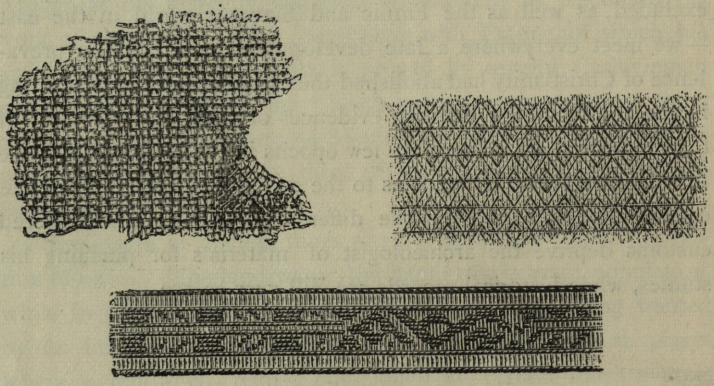
We now enter a department of which little can be told owing to the fragility of textile fabrics. Fragments only have been found, in most cases discoloured from contact with metallic objects and the moisture of the soil. Still, even on this subject we may expect great revelations as soon as the treasures collected during the careful researches carried on in Björkö by Dr. Stolpe have been arranged and studied.

Linen was used as well as woollen stuffs; the latter were known already in the Bronze Age.

The woven patterns, executed in one colour or in several, are simple, and exclusively of geometrical designs. Three specimens are here given (Figs. 124–126).

Gold was woven into parts of the dress. It is as yet impossible to give accurate descriptions of this art, as the threads have disappeared, leaving only the gold, as is shown in Fig. 127. In

Denmark finds have been made of better preserved woven stuffs and of good workmanship, but as I am speaking exclusively of Scandinavian art, I have no right to take the Danish specimens into consideration.



FIGS. 124-126.—Woven patterns.

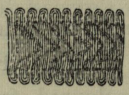
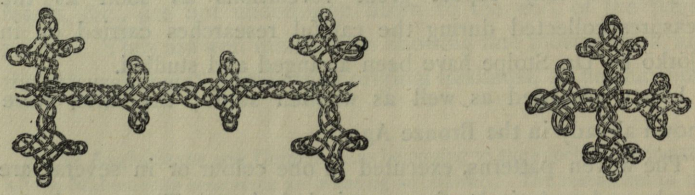


FIG. 127.—Fragment of gold-woven cloth.



FIGS. 128, 129.—Twisted gold wire.

Gracefully twisted gold wires were used for decoration, probably of the garments. Two specimens are here given, Figs. 128 and 129.

CONCLUSION.

I TRUST I have fulfilled, within the narrow space allowed to me, what I indirectly promised in the first pages of this volume, to show that the industrial arts of Scandinavia are well worth consideration even in other countries, and that the art of the present time can derive from them many fruitful lessons. I leave to my readers to deduce these lessons for themselves.

When treating of art-development in the island of Gotland, I have shown how the ancient directions in which art had been developed had arrived at the decadence of old age. The same fact is unmistakable on the Scandinavian continent. Even there we may with perfect justice ask: How could any progress be possible when every pattern of importance had outlived itself, and there were no off-sets from the old stems capable of a new life?

As I have already remarked, this consideration is of no practical interest, and we need not trouble ourselves to find an answer. Exactly at that time when we cannot imagine an ulterior development of the types of pagan industrial art, Christianity came into the land, and the new creed was followed by the mighty influences of southern and western civilisation, already far advanced in mediæval art. A new period ensued—a period of considerable revolutions with a decidedly aristocratic character. From the introduction into Scandinavia of Christianity and mediæval manners we can date the establishment of classes.

Up to this time the peasants had been what they are still called, from habit, though no longer with reason, *allmoge*, that is,

all the people. From this time, when the progress was determined by the hastier or the slower adoption of foreign civilisation, the different relations it fostered created a distinction between the higher classes and the peasants; from this time we must distinguish the Scandinavian arts as exercised by different classes. I hope to treat of this subject in another volume.

The new era commenced in Scandinavia at a good time, exactly when it was needed. It is curious to see that even in the history of industrial art we find a confirmation of the experience won elsewhere, that nothing new is introduced in a fortuitous manner. The forces which make what is new acceptable, are working not only on the side of the new development, but also within the old elements which are doomed, and such a doom is regularly preceded by forebodings and misgivings, which in industrial art appear in the shape of hopeless decay.

THE END.

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